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COOPERATIVES



COOPERATIVE LEADER SPEAKING
TO GUATEMALAN FARMERS (PHOTO: DAVID FLEDDERJOHN,
SEE ARTICLE ON PAGE 15).

Group Credit for Small Farmers

Thomas F. Carroll

[Group lending to farmers' associations, rather than to individual farmers, can reduce administrative costs and risks, and increase the efficiency of loan administration. A review of many different group credit schemes indicates several common factors in successful projects: homogeneity of the group served, group responsibility for loans, outstanding leadership, marketing arrangements tied to credit schemes and the provision of technical services.]

Group credit, broadly conceived, is non-individual credit in which funds for productive purposes are extended to groups of farmers joined together in some sort of associations, cooperatives, credit unions, users' societies, ejidos, etc., and where such organizations play a role in the securing, management, use and repayment of such funds. In most situations the association acts as an intermediary between the credit granting authority and the ultimate recipient.

Farmer's credit associations may be classified into three general categories: 1) loose or ad-hoc associations of independent entrepreneurs, which may be formed especially to receive and manage credit; 2) relatively more formalized associations of small farmers, in which group functions more or less circumscribe independent entrepreneurship; 3) groups in which a substantial share of property rights are communal or collective rather than individually held, where there are joint farming operations, and credit is only one of many functions performed by the group. The emphasis in this last category is on common production.

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AID SPRING REVIEW

This article on group credit programs originated in a program of research and conferences on small farmer credit sponsored by the U. S. Agency for International Development (AID), termed the Spring Review. Some 60 papers were written on credit programs in developing countries; over 20 analytical papers were composed on the basis of these country papers; and a series of six regional and four national "Workshop" meetings were then held in Latin America, Asia and Africa, culminating in a July 1973 conference in Washington. At all stages, university professors participated along with practitioners of many nationalities. Twenty volumes of Spring Review papers have been printed by AID, and a summary book is now in process. Other articles based on the Spring Review were published in the Development Digest, January 1974.

Possible Advantages of Group Credit

As is clear from the above classification, many farmer groups are organized for broader purposes than credit and their justification relies on considerations to which the credit function may be marginal. In multi-purpose associations, it is impossible to separate the credit objective of the group from other objectives. Nevertheless, from the point of view of handling loan resources destined for development purposes, group credit may have the following possible advantages: 1) economies of scale in extending credit to small farmers, reducing the costs of a credit agency for supervision and assistance; 2) effective administration by providing stimuli for group control and sanctions for non-compliance; 3) managerial efficiency in administering productive enterprises for which credit is extended. This may include opportunities for introducing new technology through groups, building economic and social infrastructure as well as farm capital on a community-wide basis, and 4) equity - reaching larger numbers of small farmers and a more equitable distribution of income among beneficiaries.

Criteria Related to Success

"Success" of group credit programs can be viewed in various ways:

1. To what extent have group structures been helpful in handling credit? (i. e. reducing costs, cutting rate of default, increasing mutual financial responsibility, quicker accumulation of capital, etc.).

2. To what extent has credit helped in the establishment of stronger and more viable farm groups? (Credit has sometimes been a "handle" for political mobilization of rural poor.)
3. To what extent has group credit achieved better results than individual credit, in reaching more of the poorer farmers, giving them access to minimum income, and in general, in extending the levels of economic viability of small farm enterprises downward to hitherto unviable groups? (Example: groups where usual criteria of creditworthiness have been extended to families without collateral - Uganda).

The practical application of "success" criteria to any given case is tricky. In the first place, different criteria must be used at each state in the development of groups - in the initial, extremely difficult stages mere survival can be considered a success, while at later stages economic and financial criteria are more applicable. Also, as credit is only one element in a complicated system, performance in any given time period may be affected by the availability of other components and by extraneous circumstances, such as drought, diseases, low world prices, wars, etc., which have nothing to do with the adequacy of specific credit institutions and policies.

Homogeneity and Social Cohesion

Homogeneity of the members of a credit group is an important factor for the group's success. Generally, a group functions better when the members have relatively equal land holdings and similar tenure status, rather than when the group is comprised of very large and very small farmers. When the members have similar income and ownership status, they tend to distribute the loans more equitably among themselves. If the gap between members is too large, loans may go disproportionately to the wealthier individuals. This appears to be the greatest obstacle in India, where it is reported that cooperative leadership and management are often in the hands of the larger farmers and where land ownership is the most important criterion for extending credit to members. Many of the failures of Latin American cooperatives can be ascribed to the domination of larger land owners. This means that little may be accomplished by promoting group credit programs in situations where fundamental land reforms are needed. Even where such reforms have occurred, as in Mexico, credit programs in the absence of further equalizing policies have helped the middle-level rather than poor farmer.

Taiwan deals with rural heterogeneity by allowing non-farmers to become non-voting "associate members" of the Farmers Associations. These non-homogeneous organizations appear to function well because of the mutual interdependence of the two groups - the farmers are more interested in taking out credit (2/3 of the loans), the non-farmers in receiving interest on their savings (2/3 of the deposits). It may be that the advantages of social cohesion are more important on the level of the village or local union than at higher levels of the credit organization. Reliance on the tribal ties of small villages explains the success of some African attempts to organize groups.

Group Responsibility and Solidarity

The advantages of a group appear to stem from two factors. The first is the structure of lending - how and by whom is creditworthiness determined, what form of collateral is presented, and who is responsible for repayment of the loan. The second is the internal solidarity of the group, which determines the degree of social pressure among members for proper loan repayment. If the credit society is newly formed or without real cohesion, the availability of group loans and the need to develop group responsibility for handling credits may contribute to solidarity. However, most strong credit groups are based on well-developed relations of mutual aid that existed before the credit program was begun.

To illustrate, among the countries studied for the Spring Review, such group responsibility for credit operates well in Bangladesh, Uganda and Taiwan, although the provisions for lending have been different in each case. The credit cooperatives in Comilla, Bangladesh, operate on a uniform system that allows any farmer who deposits some savings in his local society to borrow up to 5 times the amount of his combined share and savings deposits, with his plot of land taken as collateral. Group solidarity is reinforced by weekly meetings, and by the practice of extending more credit to those who attend more meetings. Also, the local group is held accountable for loan defaults; this is being enforced by withholding funds from defaulting societies. In this way, the loan structure develops or reinforces group solidarity and responsibility.

In Uganda, credit is extended to farmers who have been active members of cooperative marketing societies for at least three years. The committee of each society decides whether a member is worthy of receiving a loan, and takes as a form of collateral a bond that authorizes the society to deduct the loan and any accrued interest from the sale of produce. In addition, two other members must pledge that they will repay the loan to the society if the borrower defaults. In Taiwan, both the more formal Farmers' Association and the traditional loosely organized hui are based on strong group solidarity. Farm sizes are

similar and class distinctions are not great. The striking feature of both types of organization is the strong belief in the benefits of cooperation, and the common understanding of the informal systems of group savings and loans.

In India, the requirements for pledging land as collateral have favored the wealthier farmers and reinforced the unequal land tenure pattern. Little group cohesion has developed because the cooperatives were imposed by the government on a highly stratified and often factional village structure. In cases where little or no group solidarity exists, the sudden imposition of group responsibility for loans may have a negative effect on the farmers' willingness to allocate credit or to be part of a structure in which one individual becomes liable for the default of others. In such cases, credit may be extended through the cooperatives on an individual basis until greater solidarity exists. In the Northeast Brazilian tobacco cooperative, Treze, credit was first extended to each farm on a crop-loan basis; positive experience with this system has resulted in members' willingness to eventually pool their savings to help purchase equipment for all to use and to assume collective debt for these purchases.

Some of the data from individual countries indicate measures which seem to result in lower rates of default. Groups in which credit recipients are carefully screened tend to have less default than those in which no prior selection is made. The INDAP program in Chile suffered because credit was given too easily and without guidelines for the use of loans. Uganda's program, on the other hand, required both rigorous selection of group members and choice of credit associations before credit was extended; the result was a very low rate of default on loans. Experience also shows that group sanctions work better when members have some equity, and their own money is being risked along with outside loan funds.

An advantage of this savings requirement is the resulting potential for capital accumulation. This feature is being emphasized in the credit union programs. Although such groups need to supplement the members' deposits with other funds, their capital provides both a basis for lending and for attracting outside loans.

Leadership

Leadership and management at all levels of group credit associations are key elements in success. Leadership is required at three levels: 1) national policies and programs; 2) supervisory personnel, and 3) internal operation of societies. While some independent local and regional group experiences have been positive, ultimately it is the political leadership at the national or state level which determines

the extent or depth of the credit system. The administration controls the supply of funds to be used for loans to small farmers; in most cases the government also controls ancillary programs, such as trade, marketing, extension services, and research.

Experience shows that there is an extremely delicate relationship between the success of local credit groups and the role of the government. While government support is essential, excessive dependence on government is detrimental. Innumerable case studies testify that the development of a healthy group credit structure has been frustrated by political interference, institutionalized corruption, and the instability of the political environment. In some cases economic support has been achieved by strong non-governmental organizations, such as peasant unions or cooperative federations. On the other hand, no really significant group credit movement has prospered without active government support. Such support entails not only economic assistance, but also ideological commitment to the cause of poor farmers and to cooperative or collective forms of rural organization.

Promoters of the Western idea of "pure" and voluntary cooperation have always insisted on building independent and self-reliant groups and have deplored situations in which governments have taken a strong hand. Yet, under most situations in the developing world it is unlikely that group arrangements for poor peasants can be organized without a degree of intervention or strong outside control, especially in the initial phases of economically feeble associations. Even in Western countries, government support of the cooperative movement was more crucial than is often recognized. Countries which have developed the strongest cooperatives - Japan, Taiwan, Korea, Egypt - all benefited from strong government support on behalf of small farmers. Such public support created an opening wedge for small farmers' associations in the modernization process and then sustained their new role. As cooperative groups acquired experience and power, the government gradually withdrew from its primary role. The government can thus, at later stages of cooperative development, assume more of a support function rather than actual control.

There are, of course, isolated success stories based on local self-help. Most of the interesting regionalized cases have been sponsored by private, voluntary organizations, such as the FMD (Fundacion Mexicana de Desarrollo) in Mexico and the DESEC (Centro para el Desarrollo Social y Economico), a private foundation in Bolivia. Yet the survival of such groups under adverse circumstances, and certainly their expansion capability, is conditioned by broader institutional support. For example, excessive reliance on local resources, especially in the early stages, may simply deliver control of the local groups to dominant large producers and merchants, as was the case in Chile during the 1960s. On the other hand, credit movements that are not

yet in a position to be self-supporting may simply be taken over as a convenient channel for political patronage, as happened in the land reform settlements in Venezuela.

It is interesting to note that regardless of the original direction in which groups have been promoted (from "above" or from "below") as a system matures there seems to be a general tendency for decentralization. The locally initiated groups soon require second-level and national support institutions as linkages into the national power hierarchy, while those created by initially central direction sooner or later tend to acquire more local autonomy and responsibility, as the experience of some of the socialist countries demonstrates. In the Comilla program of Bangladesh, communication between the regional organizations (Thana Central Cooperative Association), the village society, and the farmer is maintained through regularly scheduled meetings; the members of each society meet weekly with their manager, and the manager, in turn, meets weekly with members of the Central Association. Individual societies are dependent on the Central Cooperatives for supervision and for the supply of goods and services, but they also have local autonomy - collecting savings, determining creditworthiness, etc.

In each situation, the challenge to policy makers is to sort out those features of group credit where central support is essential and appropriate to various stages in the development of a credit network and to identify those aspects where reliance can and should be placed on local initiative and responsibility. Local leadership is frequently the keystone determining the success or failure of the group. The leadership must assume a host of unfamiliar roles: arrange for timely credit supply, supervise its distribution, coordinate the other services - purchasing, marketing, extension - and see that loan conditions are met and repayment made. In addition to these administrative and accounting functions, leaders must carry out promotional and educational tasks - interesting the members in taking out loans, and teaching them how to use credit in conjunction with other services. Managerial incompetence and lack of motivation can severely hurt an otherwise well-planned national or regional program.

Because the handling of funds requires capacity for competent, honest management, the initial phase of such a program is uncommonly difficult. This phase tests not only the community's ability to mobilize managerial talent, but also the complex and delicate relationship between the new group and the lending or control institution. Leaders of credit groups tend to be more successful if they originate from the same locality (or from other, similar localities) because of their greater ability to understand and communicate with members. In any case, special training programs

in administration and accounting for the group leaders are essential before they assume responsibility for the credit program. Such specialized training has become a feature of all successful group credit schemes.

In successful groups, such as the Comilla villave society and the Uganda credit societies, the local leaders coordinate only the provision and repayment of credit, with other duties left to upper level organizations or to other cooperative societies. Latin American experience underscores the need to separate functions. Elected leaders should not be pressed into administrative tasks, best performed by trained professionals. On the other hand, local leaders have proven to be exceptionally able to make proper decisions on creditworthiness of individual members and to promote wise use of credit by the group. In general, groups seem to operate best when the local management does not have to administer too many different programs, and when strong second level organizations supervise and support the primary group's activities.

Several common problems which impede honest and accountable management seem to occur in many countries. Where the manager is paid by an outside organization, he is often not held accountable to the group's members or motivated to work on their behalf. Clearly, the salaries of managers (or an increasing part of them) should be paid by the members of the group, and they should receive incentives (e. g. a percentage of the profit) to work on their behalf.

Corruption is another frequent problem and hard to deal with in places where it is institutionalized. In Uganda, where collusion has occurred between the managers of the credit societies and the government staff, the solution has been to transfer the government staff members frequently, so that any corruption is relatively short-lived. Corruption is checked to some extent by making loans in kind and collecting repayment at marketing points. While evidence is scarce, it appears plausible that group credit schemes provide reduced scope for corruption compared to individually managed credits. A sociological interpretation holds that modern forms of cooperation are based on "institutionalized suspicion". Such organizations build in checks and balances, such as auditing, periodic re-election of officers, etc. However, in practice, the only workable checks may be those which are based on some degree of existing trust - thus the changes of honest management are best where credit institutions are built upon some local social structure in which internalized sanctions against corruption exist.

Role of the Marketing Link

One very strong generalization from the country experiences is that for the successful functioning of farmers' credit groups, the capital supply and marketing functions must be tied together.

Unless the lending association also has control over marketing, collection of local repayments becomes difficult. Moreover, if institutionalized, secure marketing channels are not available, often the whole purpose of small-farm credit can be defeated. This is especially true in the case of new crops and unfamiliar lines of production, for which new, stable markets are not yet available. In many situations, even when small farmers' groups have obtained access to capital resources, they failed because they could not get access to market outlets. In Bolovia, the credit program for rice with assured market outlets worked well, but the wheat program failed because the flour millers did not buy up the crop as they had promised. While the establishment of a link between specialized credit associations and separate marketing cooperatives is sufficient in some cases (as was the case in the joining of the credit unions in Carchi, Ecuador with the agricultural coops), in most cases credit and sales functions should be placed in the hands of the same organization as soon as practical. At later stages of group activity, it seems less necessary to channel credit and sales through the same organization. CECORA, an umbrella cooperative for farmer groups formed under the agrarian reform program in Colombia, now concentrates on supply and marketing, leaving credit to the banking system.

Evidence indicates that existing marketing groups may form an excellent base for setting up successful credit cooperatives. In Uganda, the whole cooperative credit scheme was originally built upon an existing network of primary marketing societies for export cash crops. More often, the failure of group credit arrangements prompts subsequent expansion into the marketing function, as in post-reform Egypt, where the old weak credit coops were transformed into more successful multi-purpose groups with marketing as the key element. Successful examples of integrating marketing and credit are also reported in situations in which state or private processors extended assistance through their client groups, as was the case of the Nigerian Tobacco Company. However, in the beginning stages of cooperation, farmers may be reluctant to market all of their crops through the group. For example, the Farmers' Cooperative Marketing Association in the Philippines suffered large losses from overdue loans when the members did not market their crops through the Association. In Ceylon, although cooperative members sold some of their crops through the group, the volume was not enough to recover loans from the proceeds; the solution

was to require members to sell enough goods through the coop to cover the loan, or else be ineligible for further credit. India recently established a crop-loan system, making the crop the security for the loan, so that cooperatives can be certain to recover the amount lent.

Some expert opinion also recommends combining credit not only with marketing, but with supply as well. In practice, this idea is implemented through cooperative purchasing and distribution systems. One great advantage seems to be to facilitate granting credit in kind, rather than in cash.

Role of Technical Services

Credit cooperatives and unions have the advantage of fairly intimate knowledge of their members' characters and circumstances as well as of local production possibilities. They can reduce the number of contact points between the agricultural extension agency and the farmers, and they can minimize advisory costs. Moreover, as voluntary associations, cooperatives have been able to gain the confidence of small rural farmers, especially when cooperative credit institutions use a supervised credit approach. Under most supervised credit programs, staff experts from the lending institutions work very closely with group leaders and cooperative managers in formulating the borrowers' credit needs and helping them to acquire the technical assistance and capital inputs to successfully carry out the activities for which the credit is obtained. This approach is particularly important in dealing with large groups of poor farmers with limited education and managerial experience. It is a form of participatory education which is expensive of staff time, but without which many projects would become more risky. Studies from individual countries show a trend among the more advanced programs for loan officers or coop committees to outline with each farmer his production plan so that credit, technical assistance, supply of inputs, and marketing can be coordinated. One such case is the union de prestatarios program in Venezuela, in which small farmer groups work successfully with an agency which offers a combination of credit and assistance in farm planning.

Technical assistance in credit cooperatives seems to work well in Uganda. The Assistant Agricultural Officer (credit) meets with the credit society committee and establishes a complete loan package plan for individual members. Supervision is carried out by the committee of the credit society with only spot checks by the Assistant Agricultural Officer, who is thus able to cover more groups. While this is a very efficient system, its operation depends on the ability of the society committee to perform technical supervision and cannot, therefore, be generalized.

A broader issue worth mentioning here is the orientation of technical advice for the use of small farm credit. The vast majority of such programs support short-run yield increases of specific crops and few offer development services for medium-term investments or capital building. (An exception is Taiwan, where credit groups operate a wide range of services, including machinery pools). While credit cooperatives do not seem to have performed any better in this respect than individual programs, they have a much greater potential for fostering developmental, rather than simply crop-operating credit. Even if only some members participate in new capitalization as in the horticultural ejidos in North-West Mexico, or if some of the land is pooled for diversified joint production, as in Uganda and Chile, a considerable leap in technology is possible through such a group venture. Sometimes yield-increasing technical assistance through credit groups has proven an opening wedge to more fundamental changes. The Puebla Project in Mexico was successful in raising corn yields of very poor highland peasants. While this was no real solution to their long-term income and employment problem, the corn program's success stimulated peasant groups in the area to exert pressure in behalf of more diversified credit/extension services for fruit and mixed farming enterprises.

Traditional Values as a Base for Modern Credit Institutions

There has been a great deal of speculation on the possible value of traditional communal arrangements as a base for modern cooperative forms of economic organization. Some feel that communal systems offer favorable conditions for the introduction of modern cooperative organizational forms, such as credit societies. This implies that traditional features of solidarity and mutual help can be utilized as a base for cooperative effort in the economic and technological realm. On the other hand, there is little historical evidence that traditional institutions can be directly converted into modern cooperative enterprises without passing through an individualistic phase. It has been pointed out that many of the traditional communities are not egalitarian or group-oriented. They are often highly authoritarian. Even if traditional communities are cohesive and egalitarian, it is difficult for them to take on the formal roles believed necessary for modern cooperation, such as national auditing and control over managers, without destroying the bonds of mutual trust which are the essence of their functioning.

In the case of credit societies, modernization requires an economic organization with a fairly sophisticated management (a technical-administrative function) combined with policy making based on some mechanism of group consensus. This duality is generally an unfamiliar form of organization for peasant communities and has no parallel or any connecting link with the traditional community,

no matter how "cooperative" it may have been in its original form. Many of the problems encountered by local credit unions, such as the difficulty of differentiating the role of the paid supervisor from that of the "elder" or village leader, can be traced to this type of basic conflict with the traditional behavior patterns. But the differentiation of the management function is only one aspect of the necessary shift in economic norms - courts will have to enforce contracts, investors must feel safe to lend to debtors to whom they are not related, etc.

Nevertheless, experience seems to indicate that many traditional features of mutual help, even in money matters, can be taken advantage of by the modern cooperative promoters. Indeed, many of the most successful experiences of credit cooperatives originated in earlier forms of social cooperation at the village level. Such "intermediate" type associations (bridging traditional and modern forms of institutions) are the credit clubs or rotating credit associations formed under various names in many countries (hui in Taiwan, san in the Dominican Republic, susu in West Africa). Most reporters stress the significant differences between such arrangements - which are mostly for occasional consumption and emergency family needs - and production credit societies, but these experiences pave the way for more economically oriented cooperative forms.

[Excerpted from Small Farmer Credit: Analytical Papers, Vol. XIX of A. I. D. Spring Review of Small Farmer Credit. Washington, D. C. : Agency for International Development, June 1973, pp. 255-79.]

Regional Cooperatives in Guatemala

David Fledderjohn

[Improving the lot of widely scattered small farmers in the Guatemalan highlands is the purpose of a new regional cooperative project. The steps involved in setting up the program and the pitfalls inherent in such an effort are described by the project director.]

In the formation of any kind of cooperative service or enterprise, hard questions must be explored before members are recruited, and the doors are opened for business. If the questions related to the economic realities, the competition, possibilities for failure and hard times are not faced squarely, there is a good chance that the cooperative will not perform according to expectations. The consideration of these questions, however, posed a serious dilemma for those responsible for designing and building a farm service cooperative in the western highlands area of Guatemala. On one hand, the organization must be complex, combining in one structure the essential services of agricultural information, credit, supply and marketing. No other institutions exist to provide the services to the extent required; to offer one or two through the cooperative without the others could easily leave the farmer stranded somewhere in the agricultural cycle which begins with the decision to plant and ends with the receipt of proceeds from a marketing transaction. An operation as complicated as this requires skilled

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management, efficient communications, careful accounting and control, trained employees. Finally, a volume of operations is essential which will permit economies of scale, bargaining strength and a level of profitability which will permit capital formation, growth, and patronage returns to member farmers.

On the other hand, there are several problems in applying this concept of cooperatives in the Guatemalan highlands. First, farms are extremely small. In many areas it is a fortunate farmer who is able to work one hectare. Second, farmers live in widely scattered settlements which often have little communication among them or with major towns. Third, the farmers are representatives of the ancient Indian race and culture of Guatemala. They hold strong ties of family and community, but their contacts with the world of commerce and government are few. Fourth, the low social status and poverty of the Indian farmer have contributed to a situation in which private business and services of government are not attracted to the highland areas. In light of these obstacles, it became difficult to conceive of an organization simple enough to be controlled by the farmers, yet complex enough to provide the necessary services.

Organizing an Area Cooperative

As a possible solution to these problems, a hybrid cooperative institution has been devised to combine the requirements of volume and management of an efficient enterprise, with the flexibility to reach many farmers in the scattered small communities in which they live. The basic organizational structure is conceived as an area or regional cooperative with direct affiliation of individual farmers through informal community associations. The geographic limit of the regionals depends upon access and communications, similarity of agriculture, membership potential, common language, and the efficiency with which the services may be operated. Typically, the radius of activity of the three regionals organized in the first two years of the project is about 20 miles from the administrative center (or the "office" as the farmers have chosen to call it). Within this area, there are at least 3,000 to 5,000 farm families which may be served, and they form the potential membership. Efforts in member education, promotion of membership, and paid-in capital have yielded slightly over 500 members receiving a full line of services during the first agricultural cycle in each regional.

The organizational work began with the assignment of two field agents (both Guatemalans) to areas of potential, with instructions to consult farmers on their problems, service needs, interest in organization, and to seed the idea of the regional cooperative. Only the most essential and basic concepts of cooperatives were included in the early member education, because it was known that, if members

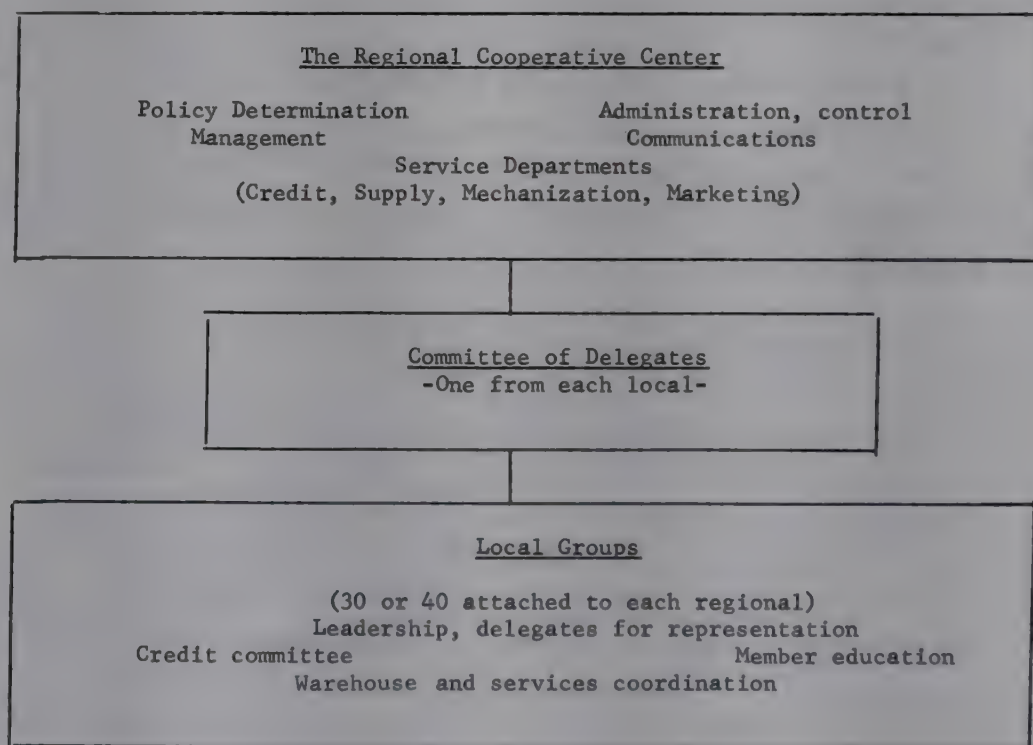
were going to join the organization, it would be for reasons of obtaining credit, supplies, and other services related to their immediate needs. Also, early in the formative period the accumulation of member capital was stressed. The membership agreed that a minimum of one \$10 share of stock would be required before any credit services would be extended. Many farmers saved a few cents per week or paid their first share in installments over a period of months whenever the field agents visited farming communities to give cooperative education, promotion and agricultural advice.

Some four months after the first contact with the farmers, preparations for legal chartering were initiated in local community meetings by discussing the essentials of the by-laws and the legal nature of the future organization. At the first general assembly meeting, the by-laws were approved, provisional officers elected, and an application for a charter was signed. Shortly after the legal charters were granted to the new regional cooperatives, general membership meetings were held to elect the board of directors and fill other elective positions. Following this, the first major decisions of the boards were the selection of a manager and the ratification of basic policies relating to such issues as credit, pricing, member eligibility, and the provision of services. Roughly one year after the first contact with farmers, the cooperatives were organized, staffed and operating.

External assistance during the formative and start-up phases of the project was provided in the form of salaries for two field agents per regional cooperative, a manager and skeleton office staff plus a few commodities such as office furniture, vehicles, and educational materials. Provisions were made for expenses such as travel, office rent, and supplies. A contract was signed between the new cooperatives and the source of assistance, with the understanding that the contribution in the form of subsidy for overhead and operating expenses would be temporary, and the amount provided would decline as operations began to produce revenues and absorb these costs. In addition, the cooperatives agreed that, during the period of subsidy, they would capitalize profits up to the amount of the external assistance in the form of indivisible reserves.

One of the keystones to the success of this type of organization is the extent to which the small farmer, living some distance from the administrative center, may be reached with the necessary information and services, and the extent to which his voice is heard by the leadership and management. To this end, organizing and making functional the local or community groups of members was crucial. Each local community served by the regional was asked to elect its

own principal official or president, and committees for credit operations, agricultural information, and education. The local group meets regularly, usually at about two-week intervals, to discuss matters of immediate concern to the members. Some local groups are also responsible for operating a small branch warehouse of the cooperative if the volume of operations or the season merits. The local president is responsible for representing his constituent group at the meetings of the Committee of Delegates, which are held at the administrative center of the cooperative for representatives of all affiliated community groups. This body functions as either an extended board of directors or a reduced general membership, depending on the nature of the subject matter to be discussed. Although the delegates have no specific powers in the organizational framework, nor are the delegates empowered with any special responsibility, the body is considered especially important as a communications instrument and sounding board of member sentiment. Graphically, the division of functions may be seen below:



The next major step to complete the organizational structure of the cooperatives was the organization of a federation of regional cooperatives in early 1973. This institution will be responsible for wholesale procurement and distribution of credit and supplies, management assistance to affiliates, internal auditing, and marketing. The federation also will provide specialized assistance in areas of member promotion and education, and will be responsible for developing new regionals and exploring possibilities for affiliation of existing cooperatives. As a national organization, the federation will also carry the responsibility of defense and representation of the interests of its members in issues relating to the welfare of organized farmers.

Problems and Observations

It is not the intent here to present the ideas of regional or area organization as a panacea for the problems of farmer cooperative development. The effort has been designed to fit the peculiar needs and opportunities in a particular geographic area of one country. Many problems have been encountered in implementing the work. Nevertheless, the experience has been sufficient to warrant certain observations to the reader which might be called caveats or problems inherent in this type of organization which are worthy of note.

Promotion. Breaking the "confidence barrier" in the process of promoting any type of cooperative is nearly always a slow, delicate process requiring a high degree of skill. It has been found even more difficult when the organization must depend on membership from several communities. Farmers tend to trust only people they know personally, and they tend to trust only an organization they understand. Cooperative field agents found that all too often the farmers respond obediently to explanations with a nod and expressions of "como no" (of course), probably to avoid confrontation on issues, and to please the outsider. This can often lead to the conclusion that the message is getting through when often just the opposite is the case. A few techniques or guidelines in promotion have been used in Guatemala with some success: 1) Frequent contact - farmers are not accustomed to attending long meetings, and the retention rate after an hour or so of discussion is low. Promotion should be undertaken in frequent, brief meetings. 2) Familiar setting - farmers are apt to be more receptive and frank if promotion is done in familiar surroundings. The shelter of a tree or a porch roof of a house in a farming community is a good setting for promotional work. 3) Practical subject matter - farmers who face the everyday problems of survival are not susceptible to preachments on the beauty of the cooperative philosophy. During the promotional phase it is preferable to concentrate on how, through cooperation, solutions to immediate problems may be found. 4) Meaningful dialogue - probably no one single talent is more useful during initial promotion than that of skillfully listening to and asking questions of farmers. 5) Honest expectations - frankness, humility, and admission of the limitations of cooperatives in solving all of the farmers' problems is probably one of the most difficult areas of promotional communication. Farmers are naturally wary of the slick answer, the know-it-all promoter, and the "we can do anything" message.

Member education. Most of the guidelines mentioned above in relation to promotion have been found to apply to member education. In fact, member education has been considered as an extension of the first contact a farmer has with the cooperative idea. The regional cooperatives have employed agronomists with agricultural extension and farm credit experience mainly, and frequent training

sessions were held early to develop methodology and content of member education as well as to prepare specialized materials for the farmer audience.

Due principally to the high rate of illiteracy, experimental materials were developed using drawings and very little text. These were made up in small pamphlets on specific subject matter to be distributed to farmers at the time a meeting was held. The pamphlet was intended to be a personal copy of visual aids used at the meeting, related to the subjects discussed, as a reminder of the points made. Charts, photographs, posters, maps, and signs were also developed utilizing color and caricatures to make the graphic message as realistic and pertinent as possible. Although there is evidence that some of these have worked well, there is still room to improve these communications techniques. Motion pictures have given little indication of being effective in member education except to attract a crowd or awake curiosity and provide entertainment.

The subject matter of these meetings has been programmed so that it is timely to the farmers interests, the progress of the formation of the cooperative, and the provision of services. As examples, credit and member capital are discussed a couple of months previous to planting season, while organizational structure and member participation in the democratic process are subjects taken up in preparation for a general membership meeting. Supplies and services of the cooperative related to plant health are discussed early in the agricultural cycle. In this project it has been noted that farmers are less receptive to information related to the operation of the cooperative than they are to information on how to raise better crops. The more successful meetings have combined agricultural and cooperative subjects.

Credit. Probably no aspect of the regional cooperative has been found more complicated, time-consuming, and critical to the future of the institution than providing production credit. The temptation was to offer relatively easy terms of credit to demonstrate to farmers that the cooperative can solve this problem of financial resources for the farmer to intensify production. Offering easy credit, however, has proven to be one of the poorest promotional measures which could be used.

It has been observed in Guatemala that the credit transaction is perceived by the small farmer in terms far different from those of a trained credit analyst who evaluates such factors as interest rate, security, viability, risk, etc. The small farmer understands credit more in terms of an exchange of trust between lender and borrower. This trust is very subjective, and is based principally upon personal characteristics and the accumulated experience of good (or bad) faith between lender and borrower. The traditional lender, even though he

lends for the profit motive, makes his decisions based mainly upon his estimate of a farmer's trustworthiness, and the kind of agreement he is able to reach with the borrower, usually in a private conversation. The borrower, in turn, pledges principally his word, in the form of a promise to respond to the confidence placed in him by making satisfactory payment.

In view of these considerations, the regional cooperatives project in Guatemala has adopted several norms of credit administration in an attempt to build upon traditional practices and to avoid some of the pitfalls of aggressive or excessively liberal production credit. After the basic information on credit and the intentions of the cooperative to provide it are communicated to member farmers, the first step taken by the field staff of the regional was a lengthy, private interview with each member. Data concerning the size of the farm, crops to be grown, labor supply, amount of the credit application, agricultural practices, and miscellaneous observations were noted in a special form.

It is made clear to members that if they expect the cooperative to demonstrate trust in them in the form of giving them loans, it is also their responsibility to demonstrate trust in the cooperative by investing their own money in the purchase of shares of capital stock. Therefore the cooperative has a policy of relating the maximum amount of credit that a member may request to the amount of his paid-in capital. A ratio of one to five (paid-in shares to maximum loan) has been devised in the project, with the mutual consent of members and the source of outside financing.

Another norm which appears to have given good results in the regional cooperatives is that of delegating the authority for final approval or denial of credit applications to a locally-elected committee of members at the village level. They know the applicants well, and a recent experience showed that 10 percent of the applicants were turned down as bad risks by the committees. The recommendations of the committees were respected by management, and were surely based on information which would never be available to someone who did not live in the towns. The same credit committee was also made responsible for monitoring the prudent use of credit and the recovery process among the members of the locality.

Insofar as possible, the credit transaction has been found most satisfactory if it is made in kind rather than cash. Farm inputs such as seeds, fertilizer, and plant health supplies are given out as credit with the understanding that the farmer, in addition to pledging his crop as security, is expected to market his crop through the cooperative. This not only contributes to the operations of the cooperative, but also makes the transaction easier for the farmer.

Pricing. During the promotional phase of the regional concept, farmers frequently grasped elements of the principle of economies of scale. In very simple terms it was understood that "if we all go together to buy our fertilizer, we will get it cheaper in big lots." To suggest to farmers that the future cooperative would be able to provide bargain prices was probably misleading. For one thing, it was found that economies through volume purchases were not as easy to obtain as had been hoped. At certain times during the season, it was observed that private trucker-dealers in fertilizers were able to buy in 500-bag-lots at the same price as the cooperatives who contracted for several thousand bags. It was also determined that the newly-formed cooperatives, weak in financial capability and experience in the market, should not undertake a price war with established firms in the areas served. After considerable discussions among the elected directors, it was decided that a price policy in line with the established competition was the best guideline. The directors reasoned that, if this policy produced good net margins, the difference belonged to the members anyway. This reasoning, it should be pointed out, came from the elected leadership; members who understood less of the mechanism of patronage dividends asked many questions as to "why is the cooperative selling at the same price as the store here in town?" Part of this problem was overcome by a policy of slightly lower prices for members than for non-members. (Note: The Guatemalan Cooperative Law permits sales and services to non-members.) Another benefit from the cooperative was the availability of credit. Farm supplies were seldom available on any but severe credit terms from local merchants.

Also, since raising capital for the cooperative has proven to be difficult for farmers when cash payments are required, it was determined that the most practical way of raising capital was through the capitalization of net margins on operations. Since price policies directly affect margins, pricing the same as the competition and crediting the members' capital accounts with the net savings according to volume of operations (after reserves are set aside) has been accepted by the members. This is probably more because they understand the capital - credit ratio which has been followed for member credit, than because they understand or accept the capital requirements of the cooperative.

The organizational base. The process of establishing the geographic limits, the types of farming and farmers to be served and the structure of the local groups has required considerable judgement, consultation with farmers, and extensive trial and error. In one area, substantial resentment was found among several small, community-based cooperatives. They foresaw, if not the end, at least hardships for their local societies as the relatively large, powerful regional swept through the countryside enticing away their membership and eating into their market. In this case, the regional adopted a policy

of not recruiting members away from established cooperatives or accepting for membership any farmer who had membership or accounts pending with another cooperative. It was judged to be more important to respect established institutions, their leadership, member loyalty and pride of an achievement, than to cause hard feelings with aggressive promotion and competition between cooperatives.

It was also found that in many farming communities many divisions of sentiment and loyalty exist from antecedents of a personal, political, racial or religious origin. The existence of these divisive forces has limited the possibilities of the regional cooperative to function as an integrative or unifying vehicle of farmers' interests. It has also been found that in many communities served by the regional cooperatives, the farmers have their own ideas on how they prefer to organize themselves. The nomenclature of locally-elected directors, the composition of committees and their functions have varied according to the preferences of individual communities.

Services. The design of services to be offered also has been adapted to satisfy the largest number of farmers within the region. Especially when starting up in the region, it was evident that, for example, the vegetable growers wanted a different priority of services from say, the wheat or maize growers. The temptation to try to offer a wide range of services to satisfy all farmers is great. However, it was discovered early that the good intentions and ambitions of the new organizations had to be trimmed down. The progression of services found to be most satisfactory to date in the regionals has been 1) agricultural advice, 2) short-term production credit, 3) farm supply distribution, 4) custom machinery services in land preparation and harvesting, 5) marketing and transportation, and 6) sales of miscellaneous supplies, tools, hardware and production items for farms. The relatively low priority of marketing services was due principally to an artificial market controlled by government for the principal cash crop (wheat) of the Guatemalan highlands, and the high percentage of the traditional crop (maize) which flows directly from the farm into personal consumption or local markets.

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Badeku on the Move

A. U. Patel and Ebun Williams

[An agricultural demonstration project established by the University of Ibadan has developed three cooperative organizations involving most members of the community. Two farmers' associations carry on production and credit activities, and a women's cooperative has sponsored projects for well digging, food grinding, and a community center.]

One of the aims of the Department of Agricultural Economics and Extension at the University of Ibadan, Nigeria is to integrate agricultural education with research and extension as an essential step towards a rapid and enduring impact on agriculture. A beginning was made in this direction by starting a pilot project in Badeku village, a small rural center of 1,300, with 275 households, located 17 miles from the campus in Ibadan South East District. During 1970-73 three separate cooperative institutions have evolved out of this project which have made improvements in the lives of the villagers.

First Steps

In late 1970 and early 1971, the first tentative measures were initiated by the Department of Agricultural Economics. The Department first mapped the village residential area, and conducted a socio-economic and agricultural survey of the village. Direct assistance was provided in the form of mass vaccinations against cholera, demonstrations on the need to

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boil drinking water to prevent cholera, instruction on the use of fermentation trays for cocoa beans, and a demonstration of maize-growing.

These early efforts bore direct fruits. After seeing the demonstration results of the first maize crop on one farmer's land, 37 farmers purchased 175 pounds of improved maize seeds and 15 farmers purchased 500 pounds of fertilizer for the late crop of maize to be planted in August 1971. Since the benchmark survey revealed that only eight farmers had previously used improved seed and fertilizer for planting maize, the impact of the first demonstration appears remarkable. In this first purchase of seed and fertilizer, the Department arranged the purchase and distribution; but after the first crop it was pointed out to the farmers that their demand for seed, fertilizer, and chemicals would continue to increase, and the Department could not arrange for their purchase in the future. As an alternative, the Department proposed an organization of interested farmers for buying and distributing supplies. The farmers then formed the Binukonu Cooperative Society (unregistered) with 81 members in June 1971.

Women's cooperative efforts were encouraged during the outbreak of cholera in early 1971. After two fatal cases in the village a concerted attempt was made to eliminate the disease, and this effort involved the women of the village in a common project. As one step, a demonstration was held on how to make water safe for the household. The demonstration included collecting water from the local streams, purifying same by addition of alum, boiling and cooling. The need for boiling was the lasting lesson in this demonstration, as a tiny worm was seen at the bottom of the water clarified with alum. Another step was the education of families on vaccination by the Ministry of Health officials. After the mass vaccination, a "keep Badeku clean" campaign was carried out. All the pupils in the school including their teachers took part in wetting and sweeping dirty dusty roads, frontage of houses in the main streets and public places like the mosque. The Health Education unit of the Ministry of Health gave series of talks to the villagers, illustrating these talks with posters, and distributing leaflets of instruction for the further prevention of the disease.

The Badeku Agricultural Production And Supply Company (BAPSC)

From these first efforts, a more formal organizational structure developed as the cooperative efforts of both the men and women in the village increased. The late maize planted by the informal cooperative group in August 1971 produced yields four times the average for local seeds with no fertilizer. After seeing the possibility of increasing the

maize yield significantly, the farmers wanted to increase their maize acreage and purchase fertilizers, insecticides and improved seeds. They also wanted money to clear the land and to spray chemicals on cocoa trees, which is their most important cash crop. To meet these financial needs, the villagers were introduced to the officers of the Western State Agricultural Credit Corporation (WSACC). The WSACC agreed to extend credit on the following conditions: 1) that the farmers would form a registered cooperative or business company, 2) that they would use the recommended package of improved practices for maize and cocoa, and 3) that they would sell their cocoa beans to one Licensed Buying Agent, who must agree to deduct the amount of loan from the value of the farmers' cocoa sales and pay this amount directly to the WSACC.

Accordingly, most of the members of the Binukonu Cooperative Society formed the Badeku Agricultural Production and Supply Company (BAPSC) and got it registered in February 1972. Initially there were 52 members, but after a few months the membership increased to 70.

The field assistants of the WSACC then prepared the farm plan for all the members and studied their credit requirements. The executive committee of BAPSC scrutinized the credit demands of each member and submitted their report to the WSACC. Upon this recommendation and the farmers' decision to sell their cocoa beans through the Western State Farmers' Union, the WSACC approved a loan of N5436 (one naira = \$1.50) at 7 1/2 percent interest. The loan was used to purchase fertilizers, plant protection chemicals and improved maize seed; to construct a crib for storing maize; to build a storehouse for cocoa; and to lend cash to members for hiring farm labor.

The members of the BAPSC decided to grow maize cooperatively on a group farm utilizing the full package of practices. They requested a few members to give their land to the BAPSC for one year to grow maize, and these members provided 3.9 acres of land at one place. The maize was planted in March 1972 and harvested in August 1972. All operations from clearing the bush to harvesting were performed cooperatively by group labor. All the operations including planting, fertilizing, spraying, weeding, etc., were carried out.

The yield on the group farm was 2680 pounds per acre, compared to an average yield of about 800 pounds per acre in the state. A serious problem developed, however, in selling all this maize. There was no demand for such a great quantity in the local market and the farmers had no facility for drying and storage. The merchants and poultry farmers in Ibadan were not ready to buy because they lacked driers and sun-drying was not possible in August because of the rains and cloudy atmosphere which lasted till the end of October. The merchants and big poultry

farmers indicated they would buy all available yellow maize in November. To solve this problem the farmers were directed to the Nigerian Stored Products Research Institute (NSPRI), which recommended the construction of a crib with improved ventilation for storing the maize cobs immediately after the harvest. The institute then demonstrated how to do this. The farmers built the crib, using mostly local material. The cobs were stored during the second week of August 1972 after an application of suitable insecticide. Some of this maize was sold in January 1973 and some was held until May. The farmers were agreeably surprised to find that the latter portion sold for an increased (seasonal) price which added nearly 30 percent to their incomes.

While Maize is a vital staple in the village diet, cocoa is the most important cash crop. It is purchased at a fixed price by the persons or institutions licensed by the Cocoa Marketing Board. Previously the Badeku villagers had sold to private merchants who advanced small loans to farmers before harvesting and deducted the amount from the value of the cocoa delivered. Most of the farmers were dissatisfied with this arrangement because they thought they were being cheated in weighing and grading. The members of the BAPSC therefore decided to sell cocoa through the license of the Western State Farmers' Union, which agreed to deduct the value of the loan of the members and repay it directly to the WSACC. This worked sufficiently well that in the following year the farmers also sold palm kernels to BAPSC which in turn sold them to the Union.

Demonstration of soyabean cultivation and preparation. The farmers usually keep their land under fallow for about two years after two years of cultivating crops like maize, cassava and yams because of the decrease in soil fertility. It might be possible to avoid land under fallow by using fertilizers and by rotating maize, cassava or yams with legume crops. However, a suitable legume crop was lacking. Since the farmers did not grow legumes to any large extent there could be a deficiency of protein in their diets, as meat is not available in large quantities. The International Institute of Tropical Agriculture (IITA) outside Ibadan has been conducting trials and cultivating different types and varieties of legumes. Soyabean was found quite promising with its easy cultivation and high yielding contents of protein and fat (40% and 20% respectively). With the help of IITA scientists, cultivation of soyabeans was demonstrated in Badeku on a plot of 30' x 20'. It was planted in May 1972 and harvested in August; the crop was quite satisfactory.

Along with the demonstration on soyabean cultivation came the introduction of a new dish. The dish of soyabeans was similar to one prepared with blackeyed peas, which is a favored dish in many homes. The villagers, while professing to like the new dish, said that they

were not sure it would form a part of their diet for the following reasons: 1) it took a long time to cook, using a lot of fuel; 2) the beans do not swell in size while cooking, as do the blackeyed peas; 3) in order to conceal the taste, (which one could acquire) more ingredients are required. Other crops will also be tried.

The early success of the BAPSC had spurred its membership to the 100 mark by 1973. The BAPSC was able to repay its first loan with interest and apply for new loans. The major activities the BAPSC carried out with these funds were buying and distributing fertilizers, spraying chemicals and other insecticides, giving cash loans to members for hiring labor, marketing cocoa and palm kernels, growing 10 acres of maize on its group farm, and storage of maize in a crib. As of February 1973, total gross income and expenditure of the BAPSC were N14,612.75 and N13,428.46 respectively, with total gain of N1,184.29. After two years, the venture appeared to be on solid financial footing.

The Bomodeoku Farmers' Society

After seeing the success of the BAPSC, another group of farmers from neighboring hamlets formed the Bomodeoku Farmers' Society (BFS). The BFS claims to have more than 100 members, but it is difficult to say exactly how many are active. The BFS has also applied for and received a loan from the WSACC. The BFS started with a maize group farm of 8 acres, and the crop is in very good condition so far. Since the BFS did not get their loan in time for buying maize seed and fertilizers for their group farm, they borrowed some bags of fertilizer and seeds from the BAPSC in the village. There is a very healthy competition between the BFS and the BAPSC in the village. With only one year of operation, however, the BFS has yet to overcome many organizational problems.

The Egbe Ore Dunni

In January 1972 a women's club, the Egbe Ore Dunni, was inaugurated in Badeku village. It started with seven members and two advisors from the University. While its main objective is to raise the level of living through lectures, demonstrations and instructions given by experts and through visits to centers connected with improved living, another objective includes learning how to improve their trade. The principal non-household occupation of the women is palm oil and palm kernel processing. Every able bodied girl and woman takes part in these two jobs. The main occupation during the palm oil off-season is the selling of cooked food. A few women are petty traders, while some sell farm produce.

Ore Dunni well. The first problem to be tackled was the non-availability of water from late September to May. Drawing water is a year-round responsibility of the women of Badeku and in the dry season this is an arduous task. Three streams which run through Badeku have water in them only during the rainy season. In the dry season women dig water holes at the bed of these streams, where water which slowly oozes out is scooped into buckets and containers. The approximate time for collecting a two gallon bucket of water this way is three hours. The water is muddy and it must settle for three days before it is used. Because of the scarcity of water, the instructions on boiling water before consumption are not widely observed.

To remedy this problem, the club's officers made a representation to the Western Nigeria Water Corporation (WNWC) for a well to be sunk in their village. As an interim measure the WNWC supplied water in tankers while digging a 22-foot well in an appropriate site. While the digging was being done, club members assumed responsibility for feeding and housing the workers.

Ore Dunni multi-purpose mill. Badeku has always had access to a large scale grinding machine called the Poscho Mills but this machine, which grinds household ingredients like pepper, beans, onions, tomatoes, small amounts of corn, etc., is available only in Egbeda, a larger and distant village. The club members decided to borrow some money to buy a small machine which would ease the drudgery of housewives and the sellers of cooked food. They borrowed N220 to purchase a machine, hired a male operator at a little cost, and rented a site on which to operate their machine. The machine began operation in July 1973. It is hoped that with the proceeds the operator will be paid, the interest-free loan repaid, and any money left will be added to the resources of the club.

Ore Dunni community center. The club has progressed from seven members in 1972 to seventy-two members in 1973. The club meets bi-monthly and members are expected to pay twenty-five kobo (\$.37) subscription monthly. There has been an improvement in the attendance of the meeting due to some of the club's achievements such as the sinking of the all-season well. With the proceeds from the subscriptions (after buying a few things for the diesel-powered pepper grinder), the club intends to build a center to house its various indoor projects and also to serve the whole Badeku community as a conference hall. Presently, bi-monthly meetings are held under the shade of large trees, but when it rains, the BAPSC store is used. During the present rainy season (July-October 1973) materials are being bought in preparation for building early in the dry season.

[Excerpted from an unpublished paper presented to the Workshop on Agricultural Sector Planning, Ibadan, July 1973.]

Note: The editor was able to accompany Mr. Patel (though not Mrs. Williams) on one of his weekly visits to Badeku village in May 1973. The accomplishments described above were in evidence, and the village leaders displayed a lively, optimistic spirit. One aspect not fully reflected in this report is the way in which the villagers were doing things for themselves. Fulfillment of the University's purposes had brought them into extensive contacts with expert attention and advice, but they were - on principle - not given money for any purpose (they made their own applications for loans, and well-building) nor any unnecessary free labor. For example, the first demonstration maize plot, on which the credibility of the sponsors was to hinge, had been planted with the help of students to ensure proper practice, but the cultivation was to be done by the plot's owner and his friends. However, they all seemed to be "too busy" to do much work. One day Patel, seeing how the weeds had grown, got out of his car and started to remove them without explanation to anyone. A few farmers passing by became curious, then joined in the task. From then on the message was received: all they could expect was advice.

The Politics of Cooperatives

Spartaco Anania

[To be successful in promoting the resources of small farmers, cooperatives must have the support of the national government. This support must be sustained by government actions to benefit the rural poor in the face of vested interests. Cooperatives must also be designed to encourage farmers' initiative, and to fit the national cultural setting.]

Cooperatives can mean many things to different people. There are cooperatives of big landlords, and there are cooperatives of landless farmers. There are cooperatives in the capitalist world, and there are cooperatives in China. In this discussion I will mean cooperatives whose objective is to promote the resources of small farmers, which may or may not imply a membership restricted to small farmers. And by the term cooperative, I will include all kinds of farmer groupings having similar objectives - even to the point of including farm labor unions.

The first point which needs to be made is this: cooperatives in isolation from a consistent national policy cannot change the socio-economic conditions prevailing in most developing countries. This boils down to exploding the illusion, the wishful thinking, that all that is needed is to indoctrinate people, steel their self-initiative, and let them do the job against powerful vested interests. This generalization about launching successful cooperatives, founded on past European experience, clearly does not hold true in developing countries. In these countries today,

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cooperatives must rely heavily on national policies which promote the welfare of low income rural residents.

This point raises familiar, basic questions: Is the promotion of the poor, the lower 40 percent of the income earners, consistent with sustained growth? Is the promotion of the poor possible without some redistribution of income? These are questions that were answered in one way during the first development decade, and that are answered in a totally different way now. In most of the 1960s, it was thought that a dualistic economy was the best way to achieve sustained growth, and with time the effects will spread. A typical example of this was the development policy of Pakistan. In the first, second, and third five-year plans the strategy was to switch resources from the consumers to those groups whose propensity to save was highest. You understand the implications of this policy for the poor. But the propensity to save is not to be equated to propensity to invest if by investment is meant productive investing in the country, and not export of capital. Yet, I should add that this policy was not unique to Pakistan, and it was endorsed by all aid-giving agencies, the UN, UNDP, World Bank and so on.

In the second development decade, we are rethinking our approach to development, and the priority objective is described now as an attack on massive unemployment and maldistribution of income. This is a drastic change from the past. And the question whether the advancement of the lower strata of the population is compatible with the maintenance of the present distribution of income is answered negatively by McNamara.

The implication of the above for cooperatives is this: cooperatives do need the government's support if they are to compete with vested interests at all levels in the country. This is not just my conclusion or the United Nations' conclusion. It is, for instance, the conclusion which was clearly stated in two classic surveys on agricultural credit in the mid-fifties, the All-India Bureau of Credit Survey and the Credit Inquiry Commission in Pakistan. I would like to quote from the Indian survey: "It would be indeed unrealistic to expect results from over-optimistic attempts to combine the very weak in competition with the very strong and expect them by themselves to create conditions, firstly, for their emancipation from the interests which oppose them, and secondly, for their social and economic development in the context of the severe disadvantages historically imposed upon them. The forces of transformation have to be at least as powerful as those which are sure to counteract it. Such forces can be generated not by cooperation alone, but by cooperation in conjunction with the state." I think that this is a very clear exposition of the points I want to make now, and the text dates back to 1955. I have five caveats regarding cooperatives.

1. Need for overall policy of government support. The political will to support cooperatives is not enough unless governments are also prepared to pay the cost of an overall policy which is intended to promote the resources of the poor grouped in cooperatives. The Pakistan example shows that while in East Pakistan cooperatives were being promoted very effectively, the overall policy was such as to undercut cooperative objectives. This may explain why the west wing registered very little success.

Another important element of government support is the tax policy. Again, in Pakistan during the second development plan, the policy was to keep the price of foodstuffs artificially low to provide cheap labor for both growing industry and for big export-oriented plantation agriculture. This, of course, penalized cooperatives of small farmers which were mainly producing foodstuffs. This inconsistency was clearly described in some statistical conclusions of a committee which was at work in Pakistan, and they were totally disregarded by the government. Other aspects of overall policy which must be consistent with cooperative promotion are fiscal policy, infrastructure development stressing the needs of rural sectors, an education policy which benefits rural areas, and so on.

2. Difficulty of dealing with power disparities. The political will to do something doesn't necessarily imply the administrative ability to carry on programs in the field. Let's have some examples. There are situations where the small government officer with very little pay who's in charge of promoting institutions which are conflicting with big vested interests is really at a loss to know what to do. Just think of the situation in Latin America, for instance, where you have a big latifundist group, and the little cooperative man who's supposed single-handed to deal with the situation. Equal difficulties may be caused by local powers within the village. Even in countries which have adopted a socialist line, the electoral strength at the village level of the party which has this ideology is normally with local notables, who may happen to be merchants and moneylenders. Now, in this case again you have a very difficult position for the poor administrative officer who's supposed to promote the interests of the poor as against the interests of the powerful, even if "powerful" in this case means a petty notable in a small village.

3. Importance of setting realistic goals. Another point is the need for the government to set realistic production targets for what cooperatives can do. The tendency normally is the other way around. Cooperatives are requested to do too much too soon, and they are not given the time to grow. Examples are infinite. In one case in Africa, subsistence farmers were grouped in cooperatives to produce maize on a commercial basis. They were given tractors and what-not, and all this was done before a marketing system was developed or roads

were built. Under these conditions, the farmers made the only rational decision possible: they used the tractors to produce what they needed, a few sacks apiece, and they enjoyed life the rest of the time.

The administration should also have the ability to avoid contradictory policies. As an illustration: when India and Pakistan broke apart, a great many Hindu merchant-moneylenders left for India and therefore there was a gap in commercial credit. At this point, credit cooperatives were artificially created to do commercial lending. What happened was this: the local notables captured these credit societies, got loans for themselves to start moneylending business and trades, substituting for the departed Hindus. Later attempts to have credit cooperatives go back to agricultural lending to the poor were unsuccessful (at least until 1967 when I was following the situation).

4. Wisdom of administrative restraint. A crucial ability that the cooperative administration should have in the highest degree is the ability not to kill the self-initiative of people in the cooperatives through excessive guidance. I think that a striking example of this ability is Comilla - even though Comilla is sometimes accused of being paternalistic in its approach. This only shows the difficulty of the task.

5. Adaptation to cultural setting. The last point I'm going to make to you is that cooperatives must be adapted to the local culture. Again, Comilla is the best example of a very intelligent and imaginative adaptation.

There is a basic difference between cooperatives as originally established in Western economies 150 years ago and cooperatives in developing countries being established now. Those farmers who established earlier Raffeisen village cooperatives in Europe were, in fact, the elite of the agriculture of that time. They owned medium-size farms and possessed the highest technical skill. They were profit-motivated and capital-creation-motivated, and the one thing they needed to acquire additional capital was to become an organized power group. In developing countries, the situation is different. In the first place, while farmers may possess remarkable skills in traditional agriculture, they are not technically trained. Innovations must be taught. Secondly, the attitude is not aggressive, as it was in the West; it is defensive. These people have been exploited for centuries, and whatever surplus was created by their labor was seized by the church, by the political power, by what-you-will. Thus, they emphasize defending the minimum level of life, which can be menaced by calamities, etc. The social solidarity of farmers at the village level can bring good responses to initiatives for preserving minimum standards. At the same time, I would say, Stakhanovites are discouraged, and for good reason. The past experience shows that additional effort is not allowed to profit those who put out this additional labor. It goes to somebody else.

The last issue of cultural adaptation is the pitfalls of the democratic approach in developing countries. By "democracy" we identify a system in which you have free elections. Now, what does it mean, free election, in a country where tribal or family structures are very strong? How does it work where there is a network of interests so that notables can put the squeeze on the others? When I listen to the idea of using moneylenders as channels for a modern system of agricultural credit, I am a little skeptical because, while everything is possible - you can teach lions to become members of vegetarian clubs - this takes some time; and in the meantime the lion may eat up all his colleagues.

I'm not, of course, suggesting that the amount of coercion should be such as to prevent self-initiative. There is a pragmatic solution to situations which need to be investigated, and I couldn't agree more with the suggestion of Professor Gotsch, [see Development Digest, January 1974, pp. 61-64] who suggested that a very careful investigation of the socio-political situation at village level should precede any attempt to introduce any type of agricultural redistribution, be this a credit system, be it cooperative, or a trade union. I think that most of the mistakes that we have committed in developing countries are due to this hasty attempt to transplant institutions and ideas from Western experience without regard to cultural differences.

By way of conclusion, I would make three points. The first is that there is definitely an increasing role for cooperatives, and for credit, in a new strategy which centers on correction of maldistribution of income and unemployment. The rural area is the great reservoir of the poor and underemployed who can be changed into a positive asset; and you cannot do this unless you group people.

The second point is this: there is a crying need in our world for imagination. In most cases what we do is suggest to developing countries that they go through the same steps through which we went 100 or 50 years ago. But we have not resolved all our economic problems, and they will find themselves crushing their heads against the same walls that we are meeting today. There are many areas which are not tackled yet that should be tackled as soon as possible. For example, we should explore labor capitalization schemes. Is the Chinese experience applicable under market conditions? Can the motivation be found, and can the organization be established in villages which are not as large as the Chinese communes of 20-80,000 people? There are also labor-intensive schemes to be developed. In Europe, cooperatives of landless workers maintain public works using labor-intensive techniques. This is another field which has not been really tackled yet. The possibility of organizing cooperative-integrated agribusiness to supply urban consumption is still an unrealized hope. And there are other examples.

Finally, there is need for better coordination of aid-giving agencies. Let me give you an example. Years ago I was in a country which wanted to establish a cooperative department. They had three different aid missions, which had submitted three different and conflicting reports. So this government tried to get the three nations together to try and iron out differences, and each mission refused. And my friend, who was in the local government, asked why. Well, I know the answer, you know the answer. In the family of aid-giving agencies we sometimes find brotherly behavior which reminds me very much of the brotherly behavior started by Cain versus Abel, and this, of course, is not helpful.

[Excerpted from the transcript of an address by Spartaco Anania: "Politics of Cooperatives, " Washington Conference of the Spring Review of Small Farmer Credit, U. S. Agency for International Development, July 13, 1973.

Comilla: Reassessment and Replication

Desaix Myers

[The Comilla cooperative system, established in East Pakistan (now Bangladesh) in the early 1960s, has long been regarded as an outstanding, imaginative rural development program. It established a two-tiered cooperative system, providing irrigation, improved rice seeds, technical instruction and credit to small farmers in a well disciplined, generally successful operation. This article examines the impact of the war and its aftermath on a system which the government hopes to replicate widely throughout Bangladesh.]

The Comilla system calls for a two-tiered structure of supervised credit organizations: self-disciplined village societies form the basic units which work together under a Thana Central Cooperative Association. The Central Cooperative borrows from either the agricultural bank or from government sources, the village society borrows from the association, the individual from the society. Requests for loans are based on production plans. Members are required to make small weekly deposits to remain in good standing; an individual can borrow up to five times his combined share and savings deposits. Carefully designed instruction courses for leaders of the cooperative groups, who must attend regularly, are an important ingredient.

The period of Pakistan Army occupation (March-December 1971) and the ensuing civil war did not destroy the cooperative system in Comilla; it imposed a period of inactivity, reducing rural cooperative activities to a subsistence minimum. This inactivity extended beyond liberation, covering perhaps as much as 18 months in all from the beginning of political turmoil in December 1970 through May of 1972.

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The trauma of occupation, war and liberation was deep, shocking, but shortlived: it is difficult, at this time to measure the full extent of its effect. By February 1972, three months after liberation, most of the refugee population had returned, farmers had begun harvesting the fall crop or preparing for the spring season. Some banks had re-opened, villagers moved freely, trade had begun to resume normal routes. While on the surface much looked as it had two years earlier, beneath the surface much had changed.

There was great searching and debate at the Academy For Rural Development in Comilla, where the ideas and management for the co-operative system had originated and where the training of cooperative leaders was carried on. With the exception of some losses of generators and vehicles, the Academy survived the occupation and was physically intact: buildings, dairy, rice mill, most of the staff. Two major changes had taken place, however: the Academy had lost the Vice Chairman of its Board of Governors and Director of its Central Cooperative Association, Akhter Hameed Khan, a West Pakistani, whose personality had dominated the evolution of the whole program. At the same time, the Academy had been thrust to the fore as the most important training institute for a national program of rural development. The new government proposed to expand the Comilla system throughout Bangladesh.

Comilla - June 1972

At Comilla, training had begun for 13 new project officers to be posted throughout Bangladesh as a first step in the Integrated Rural Development Replication. However, while planning for replication the staff at the Academy was beset with a number of immediate problems involving the program's first thana, Kotwali, where the experimental cooperative system had begun a decade earlier and on whose experience the replication was to proceed. The tractor station had been seized; tractor drivers were no longer taking orders from the Central Cooperative, but were taking orders from private individuals and using cooperative maintenance facilities without regard to ownership or replacement of parts. Pump drivers were also acting independently, had unionized, and no longer viewed themselves as beholden to their pump groups. [Pump groups were associations of farmers who relied on a common pump for their irrigation water.] The greatest tangible evidence of change, signaling both success and new problems, was the outspoken attitude of the farmers themselves. Independence had taught many farmers the importance of individual action, and now they were speaking out, offering advice freely to the Academy's theoreticians and forcing them to examine problems which had long lain dormant.

The Kotwali Thana Central Cooperative Association (KTCCA), began as an association of farmers' cooperatives, emphasizing teaching through model farmers and cooperative managers (rather than through government extension methods), discipline through savings, participation through

shares, and most importantly credit through peer organization supervision. As the KTCCA developed, Akhter Hameed recognized the potential for non-farmer cooperative organizations: he encouraged the development of the Special Cooperative Societies Federation (SCSF) within the KTCCA. As population growth took place and farmers were pushed from their land, the first disenfranchised moved to nearby towns to become rickshaw pullers; Akhter Hameed saw a rickshaw pullers cooperative as just an extension of the farmers' cooperatives. Later the KTCCA expanded to absorb other cooperatives and cooperative associations, including a bus drivers' cooperative, the Creamery and Cold Storage workers, the KTCCA employees, a housing cooperative, the Karkana Garage and Machine Shop, and the Academy's employees cooperative, along with the farmers' Agricultural Cooperative Federation (ACF).

Decentralization. The intent of the KTCCA umbrellalla was to provide philosophical, policy, and financial guidance to its daughter organizations. Akhter Hameed Khan envisioned direction from the KTCCA that would allow each federation to develop its individual leadership. He encouraged the SCSF to separate itself from the KTCCA and move out on its own; the ACF followed two years later. Separation did not produce the voluntary interaction Khan envisioned, however. Decentralization resulted in conflicts rather than independent cooperation. In June 1972, the problem of coordination and status within the KTCCA had become apparent, and the new chairman was working hard to reconstitute an active management committee.

Centralization of services resulted in a labor issue at the pump group level. Tractor and pump drivers came to view themselves no longer as beholden to the individual cooperatives within the ACF, but as employees of a higher union. The increased use of high yielding varieties had increased both the importance of new technologies (tractors for deeper furrowing and timely plowing, pumps for irrigation in the fall dry season) and the labor which handled them. Pump drivers originally selected from cooperatives to serve those cooperatives became men of influence in their area. From a peer status with their fellow cooperative members, they rose to the higher position of "the controller of water." In Thakurgaon, for example, where careful irrigation through organized cooperatives had raised the value of land nearly ten times, the pump drivers' influence rose to the point of drivers being considered prime marriage material.

Philosophy of Administration

The questions of separate authority, centralization or decentralization, and degree of government involvement, are important and controversial questions among cooperative planners. The two major approaches to cooperative organization in Bangladesh were that of the promoters of cooperatives in Rangunia, and that of Akhter Hameed Khan at Comilla.

These two often differed on the questions of location of power, source of leadership and labor for adaptation of the new technologies, and the role which should be played by commercialization.

On government involvement, Comilla seemed to wage a battle of approach/avoidance. Akhter Hameed Khan feared both the government bureaucracy and the local administration. From government he wanted a neutral donation to support the Thana Central Cooperative Association to enable its growth without dependence on "business." He was worried that if the Thana Central Cooperative were engaged in business, the manager would be open to attacks on scruples, and that a preoccupation with business would encourage the neglect of training and organizational functions. He also wanted government to supply the project officers, rather than choosing the Central Association managers from the ranks of the primary society managers. Local leaders, Khan felt, were corruptible or already tied to vested interests, and he therefore chose to hire project officers for the Thana Central Cooperative Association from the outside. Another principle stressed by Khan was that the Central Cooperative was only to be established after primary societies had been organized. The movement was to begin from the ground up. At the lowest level, the primary society, Khan felt that power was closest to the people and the people could control their leaders, managers, chairmen, and pump and tractor operators; at this level, the cooperative leaders could be local people. The local people (model farmers and managers) would receive training in weekly meetings at the Thana Center, transfer their new knowledge to the other members of the cooperative, organize share and savings collection, build the basis for the primary society. With the establishment of enough primary societies, a Central Association could be formed. Formation of quick and easy cooperative associations was to be eschewed; the government's policy of trying to register every pump group as a cooperative was to be avoided.

The premature and hasty registration of pump groups as cooperatives was seen as a threat by both the Rangunia and the Comilla organizers. The use of pumps in Bangladesh had climbed from 3,000 to 24,000 in six years. Pump groups were unstable, dominated by large farmers who formed the cooperative to receive a pump, then rented water to others. The seasonal aspect of pump groups, their limited objectives, as well as their lack of internal discipline, weakened the cooperative movement. Moreover, in Comilla the managers of the pump groups were those with the largest acreage; similarly in Rangunia, 50 percent of the pump groups were dominated by traditionally wealthy farmers. This type of organization did not offer the base for the strong Central Cooperative Association which Akhter Hameed hoped would pose a counter force to the traditional established interests already over-represented in the Union and Thana Councils (local government bodies).

Whereas Akhter Hameed opposed automatic registration of pump groups, the Rangunia leaders opted to stay out in front of pump group formation by rapidly organizing Central Associations in which to incorporate the pump groups, and to encourage discipline from above. Mahbub Alam and Mantosh Das did not want to wait until strong cooperatives were established, but instead counted on organization of Central Cooperative Associations to teach the benefits of discipline and to oppose large farmer domination. Rangunia recruited locally, not waiting for government support or neutral government project officers, in order to move more quickly. To support the Central Association activity, the Rangunia cooperatives turned to business - procurement and sale of rice and tumeric, and the distribution of fertilizer. Consequently the Rangunia Central Cooperative Association was in large part a commercial cooperative.

The basic split between Rangunia and Comilla came from Rangunia's willingness to recruit locally, to enter business, and to work with the pump groups and the registrar of cooperatives. Comilla continued to move more slowly, depending on government grant support, but trying to stay clear of the traditional government cooperative organization. It is difficult to make a judgment on the comparative efficiency of the two approaches. The Comilla experience, because of the research and training function of the Academy, is much better documented. In fact, both succeeded. In Rangunia the success is seen in the rapid spread of active cooperatives in Chittagong District, and the important role cooperative formation was to play in cyclone rehabilitation. (Because of the occupation and war, it is impossible as yet to judge whether the flurry of new relief and rehabilitation cooperative organizations can be made permanent.) In Comilla, the success is measured both in the acreage irrigated and planted to HYV's, and also in the sophistication of the problems, labor, mechanization, water and land distribution, that have ensued, problems recognizable as the second generation effects of first generation success.

Problems: Control, Default, Production

There are three problem areas basic to the success or failure of cooperative replication: the control of cooperatives and of credit by a small number of wealthy, traditional, often non-farming members of the community; the repayment of loans; and the tying of loans to production. In approaching these problems, the Comilla system used three tools - discipline, investment, and the "neutral umbrella" concept.

The principal aim of the Comilla system is to bind farmers together into a functional unit, providing not only credit but also services to make that credit functional. Technical services were provided through training model farmers to act as cooperative extension officers. Discipline was encouraged by regular meetings, and enforced participation through required savings. Investment came through regular payments

for savings and shares by the farmers, and loans based on strict investment criteria. A neutral umbrella, provided by the Thana Central Association, could supply services, pumps, fertilizers, seeds, training, credit, and do so while maintaining a neutral political interest which would prevent the cooperatives from being coopted by traditional local interests. These three elements stood together like the legs of a stool, supporting a functioning credit system.

The occupation of the Pakistani Army and the period of political disruption effectively undercut each of these three legs. By June 1972, cooperatives had lost discipline; regular saving deposits had ceased, as had repayment of loans. In the statistics for the farmers associations, loan issue dropped 10% in 1970/71 and the loan repayment rate dropped 44% below the average of the three previous years. The default rate in some cooperatives rose as high as 83% compared with the 5% default rate of the early years of the movement. Some village cooperatives with only 50 members had liabilities of 60,000-70,000 rupees. Many had come to view the cooperative as no more than a post office, a place to file for and to receive their loans, not a place requiring mutual support and assumption of responsibility.

Besides a disintegration of discipline and a failure to meet payments, the "neutral umbrella" had failed to provide effective service during the disruption. With the interruption of normal traffic flows and the sometimes conscious Army disruption of village activities, services were severely restricted. The lack of fuel for pumps at the end of the 1971 dry season reduced the yields in what had become a very important production season for Comilla farmers. Attacks on some towns and continued disruption along the borders, hampered fall harvest and delayed planting of the spring crop. Rehabilitation of transport services and establishment of an independent government were enough to restore the neutral umbrella, normalizing the third leg, services, but it is questionable whether or not the problems of discipline and investment have yet been resolved.

Although the period of disruption greatly aggravated existing problems, the loosening of cooperative discipline was not totally caused by these events. Numerous reports in the late sixties had pointed to growing difficulties. In 1969, overdue loans as a percentage of outstanding loans had risen to almost 30%, and the concern at the Academy was great enough that the staff asked that Ali Akhtar Khan perform a study of 30 defaulting societies. Akhter Hameed Khan could write of the period up to 1966/67 that: over "a period of seven years the over due loans accounted for only 1.2% of the outstanding loans in the agriculture societies (ACF) and 2.1% in the non-agriculture (SCSF)." But Ali Akhtar Khan would write in 1970 of an increase in overdue outstanding loans from Rs. 51,000 in 1966/67 to 1,287,385 in December 1967, 28.4% of the outstanding loans.

Ali Akhtar Khan's findings on the defaulting societies are particularly interesting: 1) Loan distribution was relatively concentrated in the hands of the few. 24% of the cooperative members received 62% of the loans. 2) Loan default was concentrated; the larger the landholder, the greater the indebtedness; the larger the loan, the greater the percentage of the default. 3) The proportion of loans taken by the management committee members was disproportionate; managers formed 36% of the loanees, received 65% of the loans. 4) The lower the amount in loans granted a society, the lower the percent of default; higher loan recipients had higher default percentages. 5) The rate of recovery was better for short-term loans. 6) Of the cooperatives surveyed, 40% of the members were inactive either in regular meeting attendance, participation in shares, or as recipients of loans. The larger borrowing societies were the least active.

In his Tour of Twenty Thanas report in 1969, Akhter Hameed also warned about the capturing of the cooperatives by unscrupulous managers:

Although, in my opinion, 80% of the village societies are now controlled and managed by the members, the remaining of 20% are pocket societies dominated by a few: many managers do not deposit their members' savings regularly; they are inclined to keep some money for private business; in Chandina 25 of 45 societies had been captured by defaulters who then campaign against loan repayment; there are several, rich and influential managers who not only have defaulted, but are agitating for the issue of pumps without loan repayment. They are also asking for the postponement of the cooperative associations' annual elections from which they are excluded as defaulters.

These problems are serious, but they are not unusual. They can be controlled in part by active management supervision and government leadership, but they can also be aggravated by poor policy. The desire to move too quickly without proper controls is a frequent trap, and in 1967 it seems to have caught Comilla policy makers. A decision was made in 1967 to push for increased loan disbursement. The issuance of loans for the ACF's 311 farmer societies grew to 4,244 million rupees in 1967/68, up from 1,671 in 1966/67. However, loan repayment as a percentage of loan issue fell to 42%, down from 58% the previous year, and 83% in 1965/66. The tremendous increase in loan issuance was aided by government seed capital and facilitated by an easing of loan criteria. Instead of judging loan applications on a careful review of production plans as well as applying the upper ceiling limits (based on the individual's accumulated capital, savings and shares deposit), the loan committees pushed aside production plans to lend only according to the ceiling limit. Wealthier farmers were able to get funds for shares, borrow, buy more shares, and borrow again. Without the requirement of an operational production plan, loans were

no longer tied; farmers (or non-farmers) used them for buying land (33%) of all credit in 1968), for marriage ceremonies or other non-productive functions, thus making repayment more difficult.

Implications for Replication

Comilla Academy has long been refreshing as an institution for its willingness to examine itself, to experiment, and to make adjustments. When the period of trauma had passed, the Academy resumed its role as chief architect for rural programs, with a renewed desire to recapture its original principles. Aware of the problems resulting from over-commercialization and overly rapid expansion, the Comilla staff was working in June 1972 to recover control. In three months of operation, only two loans of Rs. 200,000 had been granted by the KTCCA, one for improved rice seed, one for cattle. Moving cautiously with production and repayment in mind, the cooperative was withholding funds from defaulting societies, making a new effort to reassert an original principle: group pressure within the cooperative. Cooperatives would have to return to being as strict as they were in 1965 when the KTCCA shut down 9 of 34 working tubewells because of failure of the beneficiaries to pay agreed-upon water charges.

A return to the production plan as the main loan criterion is just as necessary for cooperative discipline. The upper ceiling limit favors the rich, at least the more wealthy. Some argue that this is not only unjust, but uneconomic: Ali Akhtar Khan pointed out that the smallest cooperatives in terms of landholding and capital acculation were also those with the lowest rate of default. Roger Lawrence, in a paper on farm mechanization, pointed out the efficiency of the small farmers: "The striking feature of the data (from Gumai Bil) is the fact that the input of man-hours increases noticeably as farm size decreases."

In considering replication, planners must pay close attention to vigorous structuring of cooperative guidelines - including those affecting the relationship between a cooperative and its labor, pump drivers, tractor drivers, managers, to problems of the national government and its representatives and to the role of extension personnel at the thana level. An unpublished study at Comilla in 1970 pointed up the growing lack of confidence in the Thana Development Committee, and increasing conflict between the three government officers most concerned. Agreement at the thana level is crucial not only to the functioning of the Central Association through provision of services and training, but to the other rural programs, the Rural Works Project and the Thana Irrigation Program.

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A Smallholder Milk Cooperative in Gujarat, India

E. Hunt McCauley

[A union of buffalo milk producers' cooperatives in Gujarat has considerably increased the incomes of its members through the development of effective technical and marketing services. Reasons for its successes are examined.]

The Kaira District Milk Producers Cooperative Union Ltd. (the Kaira Union) is in the state of Gujarat, some 300 miles north of Bombay. This union is a federation of 783 village cooperative societies made up of about 225,000 member families. Most of these member families own and operate small plots of land of 1 to 5 acres, and have 1 to 5 buffalo. An estimated ten percent are landless. The formation and operation of the Kaira Union and others in Gujarat are outside the influence of government. However, the operation of the Kaira Union has been so successful that the government has asked that it be used as a model in many areas of India where both buffalo and crossbred cattle may be used, and has commissioned a group of Kaira Union leaders to work out plans for the spread of similar cooperatives. The field work conducted by the author has been aimed at understanding the elements of success of the Kaira Union and other unions in Gujarat, the experiences in the formation and operation of village cooperative societies, and the relationship of the union to the societies.

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The essence of the Kaira Union is in the day-to-day operation of the village cooperatives societies which it serves. These societies are the village milk marketing organizations governed by people elected by the villagers and operated by local workers paid out of milk sales to the society. Beside a marketing activity, the societies function to provide inputs of concentrate feed, artificial insemination service, and emergency animal health care. They carry out certain group social benefit projects and act as a vehicle for the extension of technical and social information. Individually these societies are tightly organized and are then further woven closely into the organization of the union that serves their particular area.

The villagers sell most of their buffalo milk to the society. On occasion, some sell milk directly to other dealers; under certain fluid milk demand and supply conditions, these other dealers can offer higher prices. Other factors also enter into milk supply. For example, a decrease in supply of vegetable oil will result in a higher price for ghee (butter with the water removed). Villagers then withhold milk from the society to make ghee at home. However, the uniform price throughout the year offered by the society benefits the producer in the long run. The union does not attempt to restrict the sale of milk outside of the society, i. e., the village milk market is free.

The society influences the lives of its members in more ways than assisting in their buffalo milk business. The society forms a center for village cohesiveness and gives the villagers a sense of control over their destinies. The villagers can use society funds to build schools, water supply services, and approach roads to improve their community. Interestingly, the society has been an equalizing force in the social structure. Women and men, members of all castes, line up together to sell milk - heretofore an unheard of occurrence. The pride which the villagers have in their society is easily evident to the visitor.

The fact that the village family has a predictable cash flow from their milk sales enables them to take care of family needs as they arise. There is less reliance on the village moneylender or the merchant who extends credit for high rates of interest. The twice-a-day payment for milk is an impressive feature of this cooperative organization - some 250,000 payments of 1 to 6 Rs. are made twice a day. The detailed record keeping of these small amounts is handled smoothly by the society, as is the twice-a-day butterfat testing of each villager's milk delivery.

The union and its activities. The union is the vehicle by which villages control their own milk market and compete with private contractors to whom they were once tied. It is the organization that manages the resources needed to provide villagers with low-cost concentrate feed, milk transport, veterinary service, artificial insemination

service, and extension and management guidance for their societies. Milk processing plants are set up to process milk into non-perishable products and therefore can store large supplies. The producer then is not affected adversely by low prices during the winter when supplies are larger.

The Kaira Union, formed in 1947, is the oldest union of milk co-operatives in Gujarat. Five other unions have been formed since then and operate in almost identical fashion. Recently these six unions have been brought into a federation of unions. The main function of this federation is to develop new markets for buffalo milk, purchase certain inputs at quantity price reductions, manage the Gujarat milk grid, and assist in the development of other unions in Gujarat. The Kaira Union management board is made up of nine members representing the societies, the chairman of the District Cooperative Bank, the District Registrar, three individual members (these places are being phased out) and a dairy expert. Other unions have a similar management group makeup.

Within the Kaira Union, sub-organizations have been formed to assist the societies in their affairs and to stimulate the adoption of new techniques by the societies' members. It has divided the societies into four administrative groups. Each group is charged with the responsibility of more or less guiding the societies assigned to it. Occasionally there is organized competition among the group leadership personnel as to which group is progressing fastest in some extension area such as adoption of lucerne (alfalfa) cultivation, or increase in the number of artificial inseminations. This approach to extension takes on the air of a commercial soap-selling campaign at certain times, which has been a reason for the good results achieved. The most notable of these competitions was held in 1966 when lucerne was being introduced to the villagers. Staff members of all backgrounds were given a crash course in cooperative administration, artificial insemination and animal production and health. These people were sent to the villages to discuss the value of lucerne at small gatherings of villagers. That year 85 tons of lucerne seed were distributed to societies compared to only 6 tons the year before. This was really the start of the society-assistance groups in the Kaira Union. In 1973 the demand for lucerne seed was 300 tons.

A major propaganda/extension effort routinely gives assistance to farmers. Teams of five or six men visit villages twice a year to carry out extension work. The team includes a cattle development officer, a dairy extension officer, a milk supply officer (these three positions are frequently filled by Kaira Union veterinarians), the village artificial insemination technician and animal first aid expert, and the group-level supervisor assigned to that society. These teams

are "promoting" different things at different times; e. g. , if it is felt that the artificial insemination program is not functioning well, the emphasis will be on artificial insemination. Frequently they use "gimmicks" such as pregnancy diagnosis to attract the villagers' interest and direct their attention to the particular subject desired. Recently, government family planning officials joined these teams simply to observe the extension mechanism and are reportedly going to adopt their techniques. The Kaira Union also carries out some other activities. For example, it produces monthly newsletters; organizes visits of village women to the milk processing plant, the semen production facilities and the feed plant; and operates a mobile unit that circulates audio-visual displays on animal production through the villages every two or three years.

The group-level society supervisor plays a significant role in this organization. Each society assistance group within the Union has 10 to 12 group-level society supervisors assigned to it. Their job is to constantly be in touch with their societies, to anticipate the problems, and to bring solutions to bear before a grave situation develops. They coordinate their efforts through the village stockmen, who frequently carry out the reconnaissance and follow-up work for the supervisor.

Veterinary services, except for emergency service and artificial insemination, are furnished free to the villager. The veterinarian service is organized to make routine calls to each village once a week and to take emergency calls as they come in. There are 42 veterinarians working at the Kaira Union. Other unions have fewer. Presently, in some unions the veterinary service as well as artificial insemination service is performed by government technicians. This service reportedly is disappointing. At the Kaira Union the semen packed in ice is delivered to each village every day by the morning milk pickup truck. The village stockmen inseminate the buffalo that are brought to the society restraining facilities.

The processing, marketing, technical service and extension service activities are carried out by union personnel with one central idea in mind - the well-being of the villager. The union officials regard themselves as part of a "social enterprise." The villagers have benefited and speak positively of the valuable role this cooperative has played in their lives. The financial result is described in a study which sampled villages with milk producer cooperative societies and those without. The income from milk sales per animal was 60% greater for buffalo-owners of the former type of village than the latter. In the same study, it was shown that inhabitants of villages with societies consumed some 33-42% more milk per person than villagers not having access to a society, even if they themselves were not milk producers. It was suggested that this was due to the fact that milk was more likely to be

available at a reasonable price in the villages was cooperative societies than in those without.

Credit Delivery Through The Cooperative Organization

The experiences of Kaira Union with the practice of long-term (2-5 years) credit delivery through their cooperative organization have been generally unrewarding, and have led them to strongly discourage the use of the milk cooperative organization as an administrative vehicle for credit delivery. Other unions in Gujarat and in other states have tried cooperative credit delivery schemes and, in general, have had similarly bad experiences. Credit for buffalo purchase has been extended for 75% of the purchase price by societies to individual members. In some cases the borrower has used this money for other purposes, such as wedding and festival expenses, without the knowledge of the society; in other instances, however, the money was used to purchase buffalo. Regardless of the use of the loan, the borrower's debt to the society frequently becomes such a burden that he cannot meet the payment and still cover his daily living costs. He will soon start selling milk or ghee privately. The end result of the default is bad feelings between the society administration and the members and among members.

The Kaira District Cooperative Bank Office in Nadiad (near Anand, the headquarters city of Kaira District) is interested in lending money for buffalo purchase. In October 1972 they lent 800,000 Rs. for buffalo purchase on three-year terms through 21 societies. They are waiting until June 1974 to evaluate their experience. Their criteria for loan recipients were: membership in good standing in a society, and daily transactions with the society, identification of the animal by tattoo, and two co-signers to the note. Finally, the loan recipient may not dispose of the buffalo. The Kaira Union does not favor this practice, despite these restrictions, because similar approaches have turned out badly before. However, the cooperative bank makes short-term loans to smallholders through village agriculture societies (cooperatives which serve crop production) for farm inputs, and this type of lending has apparently been successful in the past.

Kaira Union officials very definitely feel that buffalo owners should get credit outside the milk producers cooperative organization either from banks or from private moneylenders. The villagers are apprehensive about the formality of the transaction, and about giving title as security to banks. Therefore they most often borrow from a merchant or moneylender, in spite of the higher interest rates, because the security required is frequently family jewelry and the transactions are simple.

Problems In Forming New Village Cooperative Societies

The Kaira Union, and to a lesser extent other Gujarat unions, has had considerable experience with the formation of new village cooperative societies. During this process, they have encountered many problems and have developed some solutions. Personnel have been specially trained to be members of "spearhead teams" to go to villages and stimulate the formation of societies or as they say, "organize milk procurement." They have found several sources of resistance to society formation. These include: 1) village political situations involving the power of particular individuals; 2) a traditional belief that milk is an item that should not be sold, but consumed by the producer, his family, or friends; 3) lack of confidence that the market will persist; 4) a desire to make ghee; 5) the village traditionally has been involved only in the "salvage" of milk buffalo from Bombay. (Dry buffalo are brought to the village where they calve or, in some cases, are bred and kept there until they calve. The villagers are paid according to the duration of care period.)

Approaches to solutions for most of these problems are based mostly on human relations understanding and maneuvering. One approach that has worked is to move a villager who is politically important but not entirely supportive of the society idea into a position of society leadership. The prestige helps him overcome his opposition, and eventually his political power is used for the benefit of the society. This does not always solve the problem, and in a few instances these leaders have sabotaged the society in order to prove their point to the villagers. Generally, though, the successful performance of societies in neighboring villages makes it difficult for any malcontent to misrepresent the advantages of a cooperative village society. To overcome the traditional belief against selling milk, the officials of Kaira and the other unions have employed social workers who are respected by the villagers. This sort of organized persuasion is time consuming, and in some cases villagers still remain bound to their tradition; but it has been the only approach that has had good results. When they start a new society, the union personnel always take the village leaders to other societies and specifically to Anand. This is a major excursion for these people as many of them have never ventured out of their immediate environment.

The home production of ghee adds an interesting slant to the marketing of milk. Farmers are not forced by product perishability to sell their milk. Ghee is easily stored without refrigeration and is commonly used in the preparation of traditional dishes and pastries. The union processing plants also make ghee and sell it back to villages at a subsidized or near-cost price. This is a milk procurement effort aimed at making it more attractive for villagers to ship their buffalo milk and buy ghee rather than make it at home. At times

(as in November 1973) when open market ghee prices were very high, society members bought the ghee through the society and sold it at a profit. However, the overall effect of the union manufacturing of ghee has been to decrease home ghee production and to increase the flow of buffalo milk to the processing plant.

In the villages where a high percentage of villagers are involved in the "milk buffalo salvage" business, the establishment of a society has very little chance unless there also are milk sales of sufficient quantity to support a viable society. About 200 litres per day is the minimum quantity needed to justify the village-to-processing plant transportation costs and to yield a return sufficient to pay minimum society operating costs.

These methods of overcoming resistance generally have been successful. Only once or twice in the Kaira Union has a society been formed and then dissolved as a result of these resistance sources. In another state, where Kaira Union officials are working to start cooperative organizations at the invitation of the Indian government, several state government departments are trying to bring the cooperatives into their individual sphere of control. This bureaucratic squabble has complicated the efforts of the "spearhead teams" to organize cooperatives. The solution to this type of problem in the past has been to avoid direct government involvement, even though the government may make vigorous attempts to intervene. The only involvement that the government has with Kaira Union is to audit the books of the member societies.

Reasons For Success

The men who lead Kaira Union are judged to be the element which should have initial emphasis. These are men of courage, intelligence, and dedication who brought together and motivated other men of like qualities. The early vision of S. V. Patel in courageously suggesting a farmer-controlled cooperative was carried out by the dynamic executive leadership of Dr. V. Kurien, the general manager. The purpose of mentioning these men is not only to further honor them, but to emphasize the importance of this development ingredient - dedicated and continuing leadership.

The idea motivating these men was that the rural milk producer should be the major beneficiary from the successful development of milk processing and marketing. The villagers' position is represented in every decision they make. The efforts are active in that they are constantly seeking better ways to benefit the villager through the technical apparatus established to market milk. To a degree, the success achieved in communicating with the smallholder is due to the imaginative use of modern technology. The treatment of a sick

buffalo, a pregnancy diagnosis, the operation of the processing plant have caught the villagers' attention and provided a platform from which they can promote new techniques and disseminate information on a variety of subjects.

The importance of a market system in providing the incentive for production has been demonstrated in the Kaira Union. Knowing that he could always sell milk at a predictable price encouraged the villager to actively support the cooperative society and to seek ways in which he could increase his production. The use of modern milk processing technology to achieve a steady demand in the face of a large variation in milk supply has been responsible for steady prices. The villager has confidence in the market system at the local level. This confidence is due to the tight operation of the societies themselves and of the union in its day-to-day dealings with the societies.

Being outside the direct influence of government, the Kaira Union has not been encumbered by the inefficiencies of bureaucracy. One of its main advantages has been that it has been able to employ and promote people on a merit-based system. The government has tried to build cooperative organizations in other parts of India with largely unsuccessful results. One reason for this is that they have approached the problem by building from the "top down." The solid progress made by the Kaira Union and other unions in Gujarat is due to the attention given at the village level resulting in the viability of each society by itself.

Under the direction of the Kaira Union leadership, the assistance of external aid agencies has had optimal effectiveness. Assistance from FAO, UNICEF and the government of New Zealand led to the erection of the Kaira Union processing plant. The assistance of the World Food Program of the FAO in providing powdered milk to enable the Kaira Union to enter the Bombay milk market and to generate funds for the union's further development has been important. This is called Operation Flood. Its basic idea is to convey consumer rupees spent in Bombay to the pockets of the village buffalo owner in Kaira. This external assistance has made a major contribution to the success of the cooperative union, but without the tightly organized and well coordinated marketing system such aid would have had very little impact.

[Excerpted from Survey of Successful Experiences in Assisting the Smallholder Livestock Producer. An unpublished report prepared for the World Bank under the supervision of Mr. Don Stoops of the Agriculture and Rural Development Department assisted by Ms. Hedy K. Lindgren; December, 1973, pp. 3-10.]

TOLERANCE OF INEQUALITY



A SCENE IN SINGAPORE SYMBOLIZING
NEW EMERGING WEALTH IN CONJUNCTION WITH OLDER
UNIMPROVED CONDITIONS. (PHOTO: WORLD BANK)

The Changing Tolerance for Income Inequality in the Course of Economic Development

Albert O. Hirschman

[The political viability of growth strategies in development involves the attitudes of the members of national populations who are left behind toward those who prosper. The variables affecting these often volatile attitudes are explored.]

A drastic reassessment of values is in process in the study of economic and political development. It has been forced upon us by a series of disasters that have occurred in countries in which development seemed to be vigorously underway. The civil war in Nigeria and the bloody falling apart of Pakistan are only the most spectacular instances of such "development disasters." As a result, one reads with increasing frequency pronouncements about the bankruptcy of the "old" development economics, with its accent on growth rates, industrialization, and international assistance, and about the need for a wholly new doctrine that would emphasize income distribution, employment, and self-reliance. The present paper is not written with the intention of stemming this tide, which surely represents a wholesome reaction to current problems. It is grounded, however, in the strong feeling of one participant observer that the intellectual enthusiasm for development in the fifties and early sixties reflected elements of real hopefulness that were then actually present in many developing countries. What was not correctly perceived was the precarious and transitory nature of that early

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hopeful phase. This essay is an effort to understand both where we were right and where we went wrong.

Gratification Over Advances Of Others: The Tunnel Effect

The basic argument of this paper is that a developing country's tolerance for income inequality changes significantly over time. In the early stages of rapid economic development, when inequalities in the distribution of income among different classes, sectors, and regions are apt to increase sharply, it can happen that society's tolerance for such disparities will be substantial. To the extent that such tolerance comes into being, it accommodates, as it were, the increasing inequalities in an almost providential fashion. But this tolerance is like a credit that falls due at a certain date. It is extended in the expectation that eventually the disparities will narrow again. If this does not occur, there is bound to be trouble and, perhaps, disaster.

To make this proposition plausible, I shall first argue by analogy. Suppose that I drive through a two-lane tunnel, both lanes going in the same direction, and run into a serious traffic jam. No car moves in either lane as far as I can see (which is not very far). I am in the left lane and feel dejected. After a while the cars in the right lane begin to move. Naturally, my spirits lift, for I know that the jam has been broken and that my lane's turn to move will surely come any moment now. But if that expectation is disappointed and only the right lane keeps moving; then I along with my left lane cosufferers will suspect foul play, and many of us will at some point become angry and ready to correct injustice by taking direct action (such as illegally crossing the line separating the two lanes).

It is easy to translate this situation into the language of welfare economics. An individual's welfare depends on his present state of contentment (or, as a proxy, income), as well as on his expected future contentment (or income). Suppose that the individual has very little information about his future income, but at some point a few of his relatives, neighbors, or acquaintances improve their economic or social position. Now he has something to go on: expecting that his turn will come in due course, he will draw gratification from the advances of others - for a while. It will be helpful to refer to this initial gratification as the "tunnel effect."

This is a simple and, I believe, immediately persuasive proposition. The tunnel effect operates because advances of others supply information about a more favorable environment; receipt of this information produces gratification; and this gratification overcomes, or at least suspends, envy. Envy, a powerful human emotion is the basis of the feeling of relative deprivation, that is, if you advance

in income or status while I remain where I was, I will actually feel worse off than before because my relative position has declined. There is an impressive body of converging writings by anthropologists, sociologists and economists which describes and documents various aspects of the functioning of envy in human relations. But relentless pursuit of this line of reasoning and research may have led to a trained incapacity to perceive the tunnel effect and its importance in a number of context.

A preliminary way of rekindling perception is to reverse the signs of the phenomenon under study. Suppose my neighbor or acquaintance, far from improving his position, experiences a bad setback such as losing his job while I am keeping mine. Do I now experience the opposite of relative deprivation, that is, the satisfaction of relative enrichment? This is unlikely, primarily due to the tunnel effect in reverse: once again I shall take what is happening to my neighbor as an indication of what the future might have in store for me, and hence I will be apprehensive and worried - less well off than before, just as he. This reaction is well-known from the onset and spread of depressions. The opposite reaction will surely take place when the economy experiences a cyclical upturn. Now the news that someone I know is getting his job back while I am still unemployed gives me a pleasure that overwhelms any possible envy, for the event is hailed as a confirmation that better times are under way for me also. This is close to the situation in countries that experience a vigorous surge of development.

The "Hope Factor" And Income Inequality

In a number of countries the tunnel effect has impressed itself on careful observers. Interestingly enough, it was often stumbled upon by researchers who were looking for the opposite phenomenon, such as seething discontent and revolutionary fervor among the urban poor, and were surprised at what they actually found. Writing in the early sixties, Pablo Gonzalez Casonova, a well-known Mexican political scientist, coined the term "hope factor" to explain what by then amounted to an astonishingly long record of political stability in his country. Even after this record had been shattered by the events of 1968 and the Tlatelolco massacre, David Barkin wrote: "Even though the perspectives of individual advance are limited, there is one reason for which one finds less disappointment with the development process among lower-class persons of all sectors than might be expected. With education spreading rapidly and with migration on the increase, there are a number of relatively easy ways of achieving personal advance. Thus even when an individual has been unable to get a new job or in general has not improved his income or position,

it is nevertheless probable that he knows one or several persons who have been successful in these respects. . . . "

Consequences For Integration And Revolution

The foregoing description of the "hope factor" suggests that the subject of this paper shades over into a topic familiar to political sociologists: the effect of social mobility on political stability and social integration. This relationship has usually been examined from the point of view of the reactions of the socially mobile themselves, while our focus has thus far been on those who are left behind. With respect to the upwardly mobile, the economist tends to think that there is no problem: being better off than before, these people are also likely to be more content with the world around them. Social history has shown, however, that matters are far more complicated. The upwardly mobile do not necessarily turn into pillars of society all at once, but may be disaffected and subversive for a considerable time. The principal reason for this surprising development is the phenomenon of partial and truncated mobility: the upwardly mobile who may have risen along one of the dimensions of social status, such as wealth, find that a number of obstacles still block their continued ascent, particularly along other dimensions including their all-round acceptance by the traditional elites. Consequently they feel that in spite of all their efforts and achievements, they are not really "making it." Only as social mobility continues for a long period, and the traditional system of stratification is substantially eroded, will the upwardly mobile become fully integrated - or "coopted."

Discrimination against nouveaux riches by the older elites is by no means the only reason for which the upwardly mobile may be critical of the society in which they live. A more charitable interpretation would point to the possibility that convictions about social justice, once formed, acquire a life and staying power of their own so that they are not necessarily jettisoned when pressing personal problems of material welfare have been solved - not, in any case, until after a decent time interval.

This dynamic of the socially mobile is thus the reverse of the one that has been suggested here for those who are left behind: during a first and all-round paradoxical phase, frustration and continued alienation are the lot of the upward bound, while the non-mobile derive satisfaction from the anticipation that matters are bound to improve pretty soon. This earlier conclusion of ours can be maintained, as the non-mobile see only the improvement in the fortunes of the mobile and remain totally unaware of the new problems being encountered by them. In a second phase there may then take place a symmetrical switch: the

upwardly mobile become integrated, whereas the non-mobile lose their earlier hope of joining the upward surge and turn into enemies of the existing order. It is quite unlikely, however, that the beginning of the second phase will coincide for the two groups. The upwardly mobile may become integrated, while the left-behind ones are still experiencing the tunnel effect. Alternatively, the non-mobile may experience the turnaround from hopefulness to disenchantment, while the mobile are still disaffected. This last situation clearly contains much potential for social upheaval.

From Gratification To Indignation

As was pointed out, gratification at the advances of others arises under the tunnel effect not from benevolence or altruism, but strictly from an expectational calculus: I expect that my turn to move will soon come. Nonrealization of the expectation will at some point result in my "becoming furious," that is, in my turning into an enemy of the established order. This change from supporter to enemy comes about as a result of the passage of time. Providential and tremendously helpful as the tunnel effect is by accommodating the inequalities almost inevitably arising in the course of development, it is also treacherous: the rulers are not necessarily given any advance notice about its decay and exhaustion. Thus, about the time they ought to be on the lookout for a drastically different climate of public and popular opinion, they are lulled into complacency by the easy early stage when everybody seems to be enjoying the very process that will later be vehemently denounced and damned as one consisting essentially in "the rich becoming richer."

Semantic inventions and inversions are perhaps the best portents of the turn-around. To give an example: in the fifties the term "growth pole" was widely used for the growing industrializing cities of the developing countries. At some point during the next decade, this expression, which suggested irradiation of growth, gave way to a new term, "internal colonialism," which was now said to be practiced by these same cities with regard to their zones of economic influence.

The Tunnel Effect: Determinants Of Its Strength

For the tunnel effect to be strong (or even to exist), the group that does not advance must be able to empathize, at least for a while, with the group that does. In other words, the two groups must not be divided by barriers that are, or are felt to be, impassable. If economic advance becomes identified with one particular ethnic or language group or with the members of one particular religion or region, then those outsiders who are left behind are unlikely to

experience the tunnel effect. They will be convinced almost from the start that the advancing group is achieving an unfair exploitative advantage over them. The non-mobile group may thus make the prediction opposite to that implied in the tunnel effect: as a result of another group's advance, it will expect to be worse off. Thus, the capitalist road to development appears to be particularly ill-suited for highly segmented societies; if it is followed there, it will require a far greater degree of coercion than it did in the fairly unitary countries in which capitalist development scored its historic successes. On the other hand, rejection of the capitalist road does not yield a ready proven alternative, for the centralized decision making typical of socialist systems is unlikely to function at all well in segmented societies.

A variant of a segmented society is one where most emerging economic opportunities are created or seized by foreigners. Once again, the tunnel effect will not prosper in such a situation. The greater the role of foreign capital and of foreign skilled personnel in the development process, the less expectation of eventual participation in it will there be on the part of the local population, including large parts of the local elites. Hence, tolerance for the emerging inequalities of income will be low, and the need for coercion to maintain social and political stability correspondingly high, even at an early stage of the process.

In passably homogeneous societies where resources are largely owned domestically, the tolerance for economic inequalities may be quite large since no language, ethnic, or other barrier keeps those who are left behind from empathizing with those who are "making it." It seems that, once again, "to him who hath shall be given." for the country that enjoys the manifold advantages of a non-segmented citizenry gains thereby the additional latitude of being able to develop without having to impose the serious and perhaps crippling constraints arising from the need to make all portions of the community advance at a roughly even pace. On the other hand, the greater tolerance of these more homogeneous countries for inequality has a real and possibly fearful price. As we know, the greater the tolerance, the greater is the scope for the reversal that comes once the tunnel effect wears off (unless the inequalities are corrected in time). In this fashion a somewhat counterintuitive conclusion is reached: the more homogeneous the country, the more prone will it be to violent social conflict in the course of development unless its leadership is uncommonly perceptive and able.

National homogeneity is ordinarily defined in terms of static characteristics such as unity of race, language, and religion. But the most effective homogenizing agent is perhaps an intensive historical experience that has been shared by all members of a group. Wars and revolutions can be frequently such experiences, and the tunnel effect is therefore at its most potent in postwar and postrevolutionary societies.

The result can be an irony-laden historical cycle: revolutions are often made to eradicate a certain kind of inequality, but after such a revolution and because of it, society will have acquired a specially high tolerance for new inequalities if and when they arise. A particularly apt illustration is the Mexican Revolution and its subsequent "betrayal" through the sharply uneven development of recent decades. Similarly, the egalitarian or, rather, "born equal" heritage of the United States - the collective leaving behind of Europe with its feudal shackles and class conflicts - may have set the stage for the prolonged acceptance by American society of huge economic disparities.

The more or less unitary character of a country is probably the most important single criterion for appraising the likely strength and duration of the tunnel effect. But other distinctions are of interest. It can be argued, for example, that the strength of family bonds has a direct bearing on these matters. In many cases, the advances of others will generate hope not so much for oneself as for one's children. The prediction that my children will have a better life than I did should improve my own welfare in any event, but it will do so with particular force if I expect my grown-up children to be living with me, to share in the expenses of the household, and eventually to support me in my old age. From this point of view, then, traditional family arrangements facilitate the operation of the tunnel effect and turn out to have some development-promoting potential. Provided it is not highly segmented, "traditional" society is generally in a better position than its modern counterpart to take advantage of the tunnel effect. Members of traditional societies are typically tied to each other by a dense network of obligations that are both mutual and flexible: it is none too clear what it is that is owed nor when it falls due. Hence, when some members of such a society advance, their obligations are apt to expand, and many of those who remain behind expect to be benefited in due course and in some measure as a result of their pre-existing, if imprecise, claims on the former.

Reasons for success. If individual advances are attributed primarily to chance, the success of others will occasion the tunnel effect; for the next time fortune strikes, I may well be the lucky one. Hence, the belief that the world is governed by chance, ordinarily considered so harmful to sustained development, has something to recommend itself to the extent that the tunnel effect is considered a valuable, if somewhat volatile, resource for an economy attempting to achieve growth. If, on the other hand, success of others is likely to be attributed from the outset to nepotism, favoritism, corruption, or similar practices thought to be unfair, then there will hardly be any initial feeling of anticipatory gratification among those who are not participating in the division of the spoils. It is also conceivable, though perhaps not very likely, that success of others is

attributed to their superior merit and qualities such as hard work. Those who are left out would then blame only themselves for their lack of advance.

A distinction related to these theories of success is based on the various organizational ways in which individual advances are perceived to come about. Such perceptions depend fundamentally on the decision-making system. If decision making is perceived to be largely decentralized, individual advances are likely to be attributed to chance, or possibly to merit (or demerit). When decision making is known to be centralized, such advances will be attributed to unfair favoritism or, again, to merit. To the extent that merit is not a likely attribution, decentralized decision making, which permits success of others to be explained by chance, is therefore more conducive to giving full play to the tunnel effect. It is indeed characteristic of market economies. Centralized-decision-making economic systems have come typically into the world because of excessive inequalities existing in, or arising under, decentralized systems. It is interesting to note that they will strain to be more egalitarian not just because they want to, but also because they have to: centralization of decision making largely deprives them of the tolerance for inequality that is available to more decentralized systems.

Similar considerations apply as a given economic system evolves in the direction of greater centralization or decentralization. For example, the tolerance for inequality can be expected to decline when a capitalist economy becomes more oligopolized and bureaucratized. An upsurge in populist sentiment has usually been attributed to the greater concentration of wealth that has sometimes been characteristic of such a period. But the tolerance for inequality may decline even without such concentration, simply because those who are excluded from advances no longer perceive such exclusion as temporary bad luck, but as an inevitable or even calculated effect of the "system."

Apprehension over advances of others. The principal case considered so far is the tunnel effect: B advances, and this leads A to predict an improvement in his own position as well. Similarly, a deterioration in B's situation leads A to be apprehensive about his own, as is the case in a spreading depression. Is it conceivable that A would come to feel, under certain circumstances, that an advance on the part of B is likely to affect his own welfare negatively? This sort of prediction is likely to be made in a society whose members are convinced that they are involved in a zero-sum game because resources are available in strictly limited amounts. This representation of social reality has been called the Image of Limited Good by George Foster, who claims it to be typical of many peasant societies around the world. If the advance of group B appears to be irreversible, then the Image leads to the prediction that A's fortunes will soon suffer decline. One reason for this prediction

could be A's feeling that B, as a result of his increased wealth, will also acquire more power, a good that is generally acquired at the expense of others. It is possible that we have here come upon a better way of accounting for what has been described by Foster and others as the "prevalence of envy" in peasant societies. It may well be that when B advances, this makes A unhappy not because he is envious, but because he is worried; on the basis of his existing world view, he must expect to be worse off in short order.

The reinterpretation of institutionalized envy, which is suggested here, can be seen to be closely related to the tunnel effect. In a society without the experience of sustained growth, an initially emerging situation in which one group of people is improving its economic position while another group remains stationary is probably felt to be essentially unstable with only two directions to go: either available resources will not increase, and in that case group A will necessarily suffer a decline to compensate for B's rise; or some windfall gain will expand total resources, and in this case group A will soon get its proper share of the windfall. When one or the other of these two outcomes seems more probable than a continuation of the current situation, the question of which outcome is expected takes on a narrowly balanced, knife-edge quality. The predominant choice of a probable outcome, which depends on factors discussed above, will of course make a great deal of difference to the course of social conflict in that society - all of which may explain why the forecasting of social conflict is such a hazardous business.

Concluding Remarks

The preceding argument suggests a few summary points:

- 1.) If growth and equity in income distribution are considered the two principal economic tasks facing a country, then these two tasks can be solved sequentially if the country is well supplied with the tunnel effect. If, because of existing social, political, or psychological structures, the tunnel effect is weak or non-existent, then the two tasks will have to be solved simultaneously, a difficult enterprise and one that probably requires institutions wholly different from those appropriate to the sequential case. To make matters worse it may be impossible to tell in advance whether a given country is or is not adequately supplied with the tunnel effect.
- 2.) On the basis of the distinction just made, it is possible to speak of two kinds of "development disasters." The first is characteristic of societies that have attempted to develop by means of a strategy implying the arising of new inequalities or the widening of old ones; but, in view of their structure, these

societies should have never done so. Pakistan is perhaps a case in point. The other kind of development disaster occurs in countries in which the above strategy is nicely abetted for a while by the tunnel effect, but where ruling groups and policy makers fail to realize that the safety valve, which the effect implies, will cease to operate after some time. This situation has been increasingly typical of a number of Latin American countries: Brazil and Mexico have already experienced disasters, and there are numerous portents of more to come.

3.) In contract with most conventional representations, the development process is here viewed as being exposed to crisis, and perhaps disaster, even after lengthy periods of forward movement. The view proposed here necessarily allocates a decisive role to politics. Its implications for the political evolution of countries where the tunnel effect operates are obvious. As long as the effect is strong, the developing country will be relatively easy to govern. It may even exhibit a surprising aptitude for democratic forms, which, alas, may be ephemeral; for, after a while the tunnel effect will decay and social injustice will no longer go unperceived and unresisted. As a first reaction, the coercive powers of the state will then be used to restrict participation and to quell protest and subversion. More constructive programs of responding to crisis are easy to conceive, but seem to be extra-ordinarily difficult to bring into the world.

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THE PUNJAB NATIONAL BANK

MURALI MURARILAL
BANKING

BANKING

A BANK IN INDIA
(PHOTO: U. S. AGENCY FOR
INTERNATIONAL DEVELOPMENT)

Central Banking and Economic Development

Andrew F. Brimmer

[A review of the performance of the central banks in developing countries over the decade of the 1960s indicates a number of ways in which they have assisted economic development. Some suggestions for improvement, and some dangers, are outlined.]

The celebration of the first ten years of achievement by the Bank of Jamaica is a good occasion to review the role which central banks have played in promoting economic development in general in the last decade. I will focus on the innovative steps that central banks have taken to help foster economic development. But I am not overlooking the fact that virtually all of these institutions have performed most of the traditional central banking functions — managing the note issue, serving as fiscal agent for the government, supervising the commercial banks, and managing the nation's foreign exchange reserves including the operation of exchange controls in numerous countries. Many of the central banks have carried out these assignments with considerable skill. Nor do I wish to ignore the crucial contribution that central banks can make to economic development by achieving and maintaining reasonable stability in domestic prices, and equilibrium in the balance of payments — conditions that encourage and sustain growth. It is significant and encouraging that in the last few years many, perhaps most, of the countries that embarked in the 1950s on development programs that were unrealistic

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in view of their resources, and inflationary in their effects, have shifted to more realistic programs. Most of them have found the road back to economic realism discouragingly long, however, and some of them are far from reaching the end of it yet. Consequently, whatever additional responsibilities a central bank may acquire, its basic commitment to the maintenance of economic stability—both domestically and externally — should not be downgraded.

Some of the questions that should be raised in assessing the role of central banks in developing countries in the 1960s are the following: Have central banks in developing countries taken innovative steps to encourage economic development? Have these banks been able to alter the flow of credit in favor of development needs? Have they assisted in creating institutions specifically designed to provide development finance? Have these central banks succeeded in efforts to encourage the mobilization of savings by private financial institutions? Have these banks used their proximity to the centers of political power to advise their governments as to the importance of monetary and fiscal stability in creating a climate conducive to investment and economic growth? What is the record of success—and of disappointment harvested by these central banks in the struggle for economic development? To answer these questions, a comprehensive survey was made of the special efforts of central banks in developing countries to orient economic growth toward the goals of economic development.

Mobilization of Domestic Savings

While external capital can speed the development effort, a developing country must depend primarily on its own resources. To the extent that domestic savings are made available for development purposes, the prospects for non-inflationary financing of development are enhanced. Thus, the central bank can make a significant contribution through policies which encourage savings to remain at home, and to flow to financial institutions and away from money lenders, real estate, and other speculative activity. Savers must be assured of the liquidity of the instruments issued by financial institutions in return for their funds — as well as about the soundness of the institutions themselves.

Once the question of safety is answered, savings are attracted by the promise of reasonable earnings; the interest rate on savings deposits must be competitive with alternative uses of funds. However, in the highly inflationary environment of many developing countries, savings will not flow to those financial institutions that could make them available for productive investment unless interest rates are high enough to yield realistic earnings in the face of inflation. This means that the rate of interest should at least be "positive" in the sense that it exceeds the rate of inflation. Where deposit rates are negative in this sense, the flow of savings into financial institutions is restricted

to a few special cases — such as deposits by individuals with no other means of holding their funds, by those who use savings accounts for current transactions, and by those who deposit funds for special purposes, such as gaining access to bank credit. In the meantime, other institutions, such as finance companies, offer higher rates.

In Brazil and Chile, the value of financial instruments has frequently been linked to a price index to overcome the disabilities of low interest rates during inflation. The Bank of Israel has encouraged the development of a variety of instruments attractive to savers. These measures include deposits denominated in dollars, deposits tied to the price index for value maintenance, and, recently, full removal of ceilings on interest rates. The result was an unusually high private savings rate. In Asia, several central banks in recent years have played a major role in the mobilization of savings for development through dramatic reform of interest rate structures. The best example is that of Korea, where in 1965 interest rates on deposits were increased sharply -- from 15 to 26 percent in the case of one-year bank deposits. Commercial bank loan rates were also raised substantially. This reform, supervised by the Bank of Korea, was followed by an increase in the national savings rate from 7 percent in 1964 to 16 percent in 1969, and inflationary pressures were simultaneously reduced; economic growth averaged 11 percent per year in that period. This body of experience suggests that central banks might look to raising the real return that the banking system can provide to the original savers in order to mobilize more financial resources for investment.

In Africa and the Middle East central banks are generally strictly limited — in terms both of time and amounts — in the extent to which they can lend to governments. However, by specifying certain asset ratios, central banks in this part of the world have channeled a share of private savings to governments — so that they could be used for the purpose of development. Included in the composition of almost all such ratios were short-term government obligations. Since private demand for credit in Africa is often quite slack, commercial banks might hold idle funds or invest abroad if they did not have to hold Treasury bills to satisfy such liquidity ratios. While this has been a successful means of mobilizing savings potentially available for development purposes, it would not be desirable under all circumstances. If the liquidity ratio comes to be treated as an instrument for ensuring a market for the obligations of governments, it can lose some of its usefulness as an independent monetary tool. Further, in an economy where credit is tight, such mobilization of funds would squeeze the private sector from which the bulk of investment generally comes.

One of the major obstacles to channeling potential savings to investment in developing countries is the lack of liquidity of financial

assets. A number of countries have adopted measures to enable an investor to liquidate his holdings without incurring prohibitive capital losses. Mexico provides an outstanding example: this involved a commitment by issuing institutions to repurchase their financial instruments at par at any time, regardless of their maturity. The Bank of Mexico, the Nacional Financiera, and, ultimately, the government, stood behind the financial institutions bidding for savings. In effect, this meant guaranteeing that these institutions would always be able to meet their obligations to savers.

Of course, the development of almost every type of capital market institution enhances the liquidity of financial instruments. Countries such as the Philippines, India, and Malaysia have rather advanced capital markets, where funds can be marshaled and channeled for development purposes. The Central Bank of the Philippines has played a major role in developing an open primary and secondary market in Treasury bills. Such action, of course, requires that governments be willing to pay the higher interest costs associated with a free Treasury bill market. The creation of efficient stock exchanges (where appropriate) would increase the liquidity of financial investments. However, where such exchanges do exist in some developing countries, inadequate public disclosure of financial data on listed firms is a principal holdback to the expansion of securities markets. In the case of the combined stock exchange of Malaysia and Singapore, extensive public disclosure has been a principal factor in making the exchange outstandingly successful. Other developing countries and their central banks, pondering how to increase the availability of funds for investment, might well study this example. Other promising areas would appear to be development of a Treasury bill market and markets for commercial paper.

In addition to the measures just described, central banks may encourage saving in at least two other ways — both aimed at reassuring savers as to the security of their deposits. One is by means of deposit insurance. The other is examination of banks with the objective of enforcing standards of sound banking.

Central Bank Assistance to Development Institutions

In some places — Latin American countries provide many examples — central banks have also provided commercial banking services, and some have been given specific development banking assignments. Over time, however, there has been a separation of these functions, since experience indicated that their location in one institutions tended to produce conflicts of interest and to interfere with the effective performance of central banking functions. But this separation does not mean that central banks have played no role in the growth of

development banking institutions. Central banks — with varying degrees of appropriateness and effectiveness — have provided capital for development lending institutions, such as agricultural and industrial development banks. They have extended credit to them, purchased their securities, or helped to create a market for their securities.

In Colombia, Bolivia, Ecuador, Guatemala, Jamaica, Mexico, India, Afghanistan — and quite generally in Africa — central banks have subscribed to some part, usually a minor part, of the equity capital of developmental institutions. On the whole, however, this technique has had only limited use. This is as it should be, because heavy dependence upon central banks for provision of equity capital would have been inflationary. Extension of credit to development institutions by central banks is subject to the same difficulty. To the extent that these loans are renewed and never repaid, they assume the characteristics of a capital contribution that does not come out of savings. Much the same can be said of the fairly widespread practice, particularly in Latin America, of direct purchase by central banks of the obligations issued by development finance institutions. In general, it is best that development institutions be financed by other sources whose funds represent savings.

Some central banks have turned to less direct methods of helping development finance institutions raise their capital, for example in El Salvador, Guatemala, Dominican Republic, Argentina, and Honduras. They have attempted to create a market for the securities of development finance institutions in more or less non-inflationary ways — including the use of profits from the ordinary operations of the central bank. At various times over several decades, banks in Argentina, Guatemala, and Honduras have tried to increase the liquidity of investments through the use of repurchase commitments. In general, it seems that central banks in developing countries have not exhausted their financial expertise in trying to make a contribution in this area. As an example, it appears that where efforts to make markets for the securities of development institutions have been explored only tentatively they might be revived with greater determination, and with more stress on ways to keep securities lodged in private hands. It might also be asked whether the guarantee instrument could be put to effective use here, without opening a line to central bank resources that would channel inflationary funds into the economy.

Allocation of Credit for Development Purposes

In a substantial number of developing countries the commercial banks are foreign-owned, and most of them traditionally have concentrated on financing foreign trade and domestic commerce. In the

face of this situation, a number of central banks of Latin America, Asia, and Africa have made extensive, and varied, efforts to influence the flow of commercial bank credit away from such traditional uses and toward capital development projects. In fact, it is probably in this area that the greatest amount of central banking expertise and effort has been expended to promote economic development.

With the allocation of credit in mind, differential discount rates have been used in a large number of countries. In Latin America, these include Argentina, Bolivia, Brazil, Colombia, Costa Rica, the Dominican Republic, Ecuador, Peru, and Venezuela; Israel, India, Indonesia, Korea, Pakistan, the Philippines, Taiwan, and Thailand have also employed such differentials. Ordinarily, the central bank charges a preferential rate on discounts or advances against favored types of paper to induce the commercial banks to increase their lending for activities in which this paper originates by reducing the cost of funds. Experience suggests that the use of differential rates has not been universally successful in shifting credit uses. The potential for effecting a change in the pattern of lending by the use of multiple discount rates would increase as recourse to central bank credit by the commercial banks became more extensive. But it could seriously frustrate efforts to pursue a restrictive credit policy at times when such a policy may be needed on overall economic grounds.

Several central banks have sought to allocate credit by the establishment of portfolio ceilings. This technique has been used in Costa Rica continuously since 1948, and to some extent in Colombia; it has also been used in the Philippines, Nigeria, and Zaire. The Costa Rican regulations provide an overall ceiling for each bank with separate subceilings on loans for major economic sectors and on some subsectors. The system may have helped to change the pattern of credit flow, although the data are subject to questions as to the accurate classification of some of the commercial bank loans. The Colombian system, which was in use briefly in the early 1960s, may also have had some effect on the pattern of credit allocation. But the fact that it was discontinued suggests that the Colombian authorities were dissatisfied with the results, or that the difficulties of securing compliance were too great in view of the results achieved.

Central banks in developing countries have made extensive use of reserve requirements as a tool of monetary management. A number of these institutions have linked differential reserve requirements to the composition of commercial bank portfolios to influence the allocation of credit. This technique has been employed in an elaborate way in Mexico for over 20 years. Commercial banks are allowed to maintain a lower cash reserve ratio when prescribed percentages of their portfolios consist of specified types of loans or investments. The prescribed percentages may be changed as the central bank

shifts emphasis from one type of loan to another. Portfolio ratios associated with reserve requirements have also been used to some extent in Argentina, Brazil, Chile, Colombia, the Dominican Republic, and Peru. The Mexican authorities appear to be satisfied with the results obtained under their system; they believe it was instrumental in inducing commercial banks to take an interest in types of productive loans which they had not made because of inertia or force of habit. Furthermore, there seems to be a feeling that, since banks have become accustomed to making such loans and have found them remunerative, they may well continue such lending in the absence of the regulation.

The import deposit requirement technique (primarily intended to deal with balance of payments difficulties) has also been employed by some central banks to influence the allocation of commercial bank credit. Generally, the deposits are required to be held by the central bank; alternatively, commercial banks are required to hold with the central bank reserves equal to these deposits. Imports for development purposes and other essential needs may be favored with a low requirement, and a progressively higher requirement may be applied as the essentiality of the imports diminishes. Import deposit requirements with differential rates have been used in Argentina, Brazil, Chile, Colombia, Ecuador, Indonesia, Pakistan, Paraguay, the Philippines, Uruguay, and Vietnam. The import deposit scheme, however, may leave domestic producers of non-essential and luxury goods with ready access to credit, and it may also provide domestic producers of all goods subject to the requirement with too great a degree of protection against imports, one which may not be needed in the long run.

Virtually all central banks in the African and Middle East regions have taken some kinds of steps to influence the flow of bank loans to priority or favored activities within the private sector. Techniques used include credit guidelines, quantitative rediscount ceilings, direct approval of bank loans, and selective liquidity ratios. Countries using one or several of these techniques include Nigeria, the Ivory Coast, Tunisia, Zaire, and Israel. In general, the practice is replete with direct and quantitative controls. In a number of instances, central banks have given specific — and in some cases quite detailed — guidance with respect to the desired composition of the commercial banks' loan portfolios. The Central Bank of the Philippines has followed such a practice since April 1957: all bank loans are classified into four priority categories, with those in the more essential loan categories being given preference in central bank rediscounting operations; maximum ceilings are imposed on loans in the two less essential categories.

In Zaire, direct and quantitative central bank controls seem to have been successful in increasing significantly the amount of credit

extended to agriculture while reducing the amount intended to finance imports. The Bank of Israel has probably gone as far as any institution in encouraging favorable terms for development lending: controlled credit is extended at about 9 percent, whereas ordinary bank credit costs about 17 percent. These controlled credits include re-discounts, specified loans which give the bank an exemption from liquidity requirements, and credits granted on the basis of deposits received under approved savings schemes. In recent years, credit controlled by the Bank of Israel has represented about 30 percent of all bank credit outstanding to the private sector. The conclusion which may be reached is that a few attempts to allocate credit for development purposes seem to have been particularly successful, but on the whole the results have been rather mixed.

The Central Bank as Development Adviser

Serving as adviser to government is one of the oldest and most widespread roles of central bankers. In the context of economic development, this role takes on special significance. Advice is particularly needed in four areas: 1) policies for domestic stability, with particular emphasis on appropriate fiscal policies; 2) exchange rate policy, with the objective of maintaining external balance; 3) the formulation of development plans that are feasible in view of the country's economic and financial resources; and 4) the broad range of policies affecting the climate for investment, domestic and foreign.

How a central bank performs as a development adviser will turn on a variety of factors specific to particular countries. As a rule, the central bank is likely to be a well-equipped institution in its staff and financial resources for undertaking the research and analysis on which a well conceived development plan must rest. The opportunities open to a central bank to advise the government will depend partly on the type of overall organization created to formulate and execute the plan. In countries with strong planning commissions or development ministries, the scope permitted to the central bank may not be very wide. But, on the whole, the evidence suggests that in many countries the central bank is a senior partner in the development enterprise.

A survey of central bank experiences clearly suggests that the bank's relative freedom from involvement in day-to-day debates on economic policy has been crucial. In general, where the central bank has been allowed to maintain a reasonable degree of detachment, its advice has tended to be objective—and respected—even if not always received with enthusiasm. The evidence suggests that central banks have usually been a good source of advice to their governments on problems of economic development. However, where the central bank shares the advisory role with other institutions—the method of

sharing varies greatly from country to country—it is hard to make an assessment of the overall results.

Central Banking and Economic Development in the 1970s

Having surveyed the role of central banks in developing countries during recent years, we should now try to look ahead to see what course they may be expected to follow in the current decade. It is my impression that expectations about the availability of foreign assistance are much less optimistic today than they were in 1960 when the General Assembly of the United Nations proclaimed a "Decade of Development," and set a target for the total flow of resources, private and official, at one percent of the gross national product (GNP) of the advanced countries. It was endorsed by the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development. In the five years before 1964, the target was exceeded. But in the concluding five years of the decade, net disbursements of official development aid by the DAC countries rose only slightly in dollar terms, and decreased as a percentage of GNP from approximately 0.5 percent in 1964 to just over 0.3 percent in 1969. Reasons for this shortfall in official development assistance can be traced to a number of factors: widespread inflationary pressures were created by excess demands in industrialized countries, public resistance to higher taxes was becoming stronger, and some of the principal donor countries were also plagued by balance of payments deficits. In contrast, the flow of private resources nearly doubled in dollar terms—rising in percentage of the aggregate GNP of DAC countries from 0.26 percent in 1964 to about 0.33 percent in 1969.

There has emerged a worldwide shortage of capital, arising from strong drives for economic and social advancement in every region. The pressure for the use of capital to finance these improvements has become as intense in the industrialized countries as it is in the developing nations. This shortage of funds cannot be expected to disappear at any time soon, and it is forcing nearly all countries to reexamine priorities in the harsh light of political realities. In this light, home needs increasingly are registering the first and strongest claims on the resources of capital exporting countries. Consequently, countries expecting a flow of external development resources in the 1970s that will exceed the amounts obtained in the 1960s may have to do more to attract private capital.

If developing countries do concentrate more directly on efforts to attract private investment, their central banks will have an enlarged opportunity to contribute to the development process. The more influential they are with their governments, the more successful they

will be in supporting this effort. The task of attracting scarce private capital to the developing countries requires an investment climate that both domestic and foreign investors find compatible. It must be emphasized that it is necessary to create conditions conducive to domestic investors as well as to owners of foreign capital. Undoubtedly developing countries will want their own citizens to own a substantial share of privately financed enterprises, which means that domestic investors will have to provide a sizable proportion of the required resources. Efforts to attract private capital call for the careful building of capital markets. This includes increasing the flow of savings to financial institutions, as well as building institutions that provide liquidity to investment. Attracting scarce—and expensive—private capital to developing countries also requires that the firms and industries financed must be able to survive under the pressure of international competition. They must not be overly sheltered from the winds of competition behind excessively high protective walls; to the extent that the industries of developing countries are able to export products that are competitive in price and quality, they will have a better chance of penetrating foreign markets.

All of these—the economic stability that provides a good climate for investment, policies that avoid oversheltering of industries and make them fit to compete and earn in foreign trade, the building of capital markets—all are the results of policies which central banks are particularly capable of influencing through their own actions and through their advice to governments.

[Excerpted from "Central Banking and Economic Development: The Record of Innovation," a speech delivered at the Tenth Anniversary Celebration of the Bank of Jamaica, Kingston, October 10, 1970.]

Indigenization of Nigerian Banking

G. O. Nwankwo

[While indigenization of a banking system dominated by expatriate banks is generally desirable for development, the conditions for successful banking operations must be established regardless of ownership. Indigenization by itself solves no problems.]

It is now the fashion in most developing countries to indigenize the banking system. Nearly all the independent countries in Africa have established central banks and have introduced local incorporation of commercial banks. In some of them, Libya, Sudan, Somalia, and Tanzania, the commercial banks have been nationalized. In others, Malawi, Uganda, Kenya and Zambia, substantial, sometimes majority, indigenous participation in commercial banking has been brought about. It is against this background that the 1972 decree in Nigeria stipulating 40 percent indigenous participation in foreign-owned commercial banks has to be viewed. This decree is the latest in a series of measures which Nigeria has taken since the introduction of the Federal Constitution in 1954 to indigenize the banking system.

Commercial banking in Nigeria has been dominated by the expatriate banks. Aside from one indigenous bank started in 1933, there were two years in which indigenous banks were formed: 145 were registered in 1947, and 40 in 1951. But a 1952 law requiring a minimum of £12,500 in paid-in capital and reserves caused almost all these mushroom banks to close, so that only two remained in operation by 1954. At the time of the establishment of

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the central bank in 1959, three of the eight commercial banks were expatriate and five were indigenous. Between them they had about 160 branches spread throughout the country. By the end of 1971 there were 14 commercial banks of which six were expatriate and eight indigenous, with over 300 branches in the country. But the expatriate banks account for more than two-thirds of the bank offices, 75 percent of all loans and advances and more than 80 percent of total bank deposits. As a result of this overwhelming concentration of banking power, the expatriate banks have been accused of monopolizing the Nigerian banking system.

Dissatisfaction also arose because the expatriate banks were accused of maintaining low branch density relative to the population, and of concentrating these branches in the principal towns and commercial centers. In addition, the banks were accused of lending little to and having little contact with Nigerians, of being extremely conservative and discriminating against the indigenous population.

When the World Bank Mission examined these charges in the early 1950s, it found that the expatriate banks "have played virtually no part in developing local African entrepreneurship" and that, given their practices, they would contribute rather little to meeting the demand for increased credit facilities which Nigerians require to foster their economic development. Apparently taking the practices of the expatriate banks as an act of fate and immutable, and thereby confirming the charges against them, the Mission concluded that, in the circumstances, "the task of providing credit to African enterprise and of educating African businessmen . . . will therefore fall to African banks and governmental lending institutions." However, despite the existence of indigenous commercial banks, predominantly owned by government or governmental agencies, the overwhelming concentration of commercial banking business remains in the hands of the expatriate banks. The Decree stipulating 40 percent indigenous participation in foreign banks can therefore be viewed as an attempt to reduce this concentration of banking power in foreign hands since ordinary market forces have failed to do so. This is in order to enable Nigerians to control their "commanding heights" because, as the former President of Nigeria, Dr. Azikiwe, once stated: "the winning of political freedom for Nigeria would be meaningless and lacking in reality if Nigerians are unable to win economic freedom at the same time. Whoever controlled the banking operations of any country ultimately controlled the economy of the country."

Some Basic Questions

It seems to me that it is crucial to the successful execution of this policy of indigenizing the banking system that certain basic questions should be asked: Is the charge of discrimination against the expatriate

banks really justified? What is the proper role of banking in a developing economy like Nigeria? Unless the right answers are found to these questions, wrong and misguided policies towards banking may be adopted.

It seems to me that the charge of discrimination against the expatriate banks is not justified. First, what appears to be discrimination derives from the objectives and practices of the expatriate banks and the institutional limitations of the indigenous population. The expatriate banks were established to finance foreign trade between the overseas countries and their home countries. In Nigeria the banks saw their primary role as financing imports of manufactured goods and capital goods into Nigeria and the export of raw material from Nigeria. Domestic or retail banking developed later and is of secondary importance. In addition to profitability, this explains their concentration of offices in the principal towns and commercial centers.

Second, the preference expatriate banks give to expatriate businesses and customers and their consequent limited lending to indigenous customers, giving the former an unfair advantage over national firms in obtaining credit and earning profits, derives from the fact that, for the most part, the expatriate firms in developing countries are branches or subsidiaries of large corporations, at times of the same origin as the expatriate banks. They therefore constitute better credit risks, can offer ancillary services, and are more credit conscious and have more developed banking habits than the indigenous customers. The fact that this gives the expatriate unfair advantage in obtaining credit and earning profits is an unfortunate by-product.

Third, discrimination would be inconsistent with the profit maximizing motives of the expatriate banks. In particular it would imply that they would ordinarily turn down credit-worthy good business propositions by indigenous customers. But the truth lies in the inability of the indigenous customers to meet the tests of creditworthiness the banks set for all customers, expatriate and indigenous alike. These standard tests have been perfected by long trial and error in the home countries.

Expatriate banks. It is, however, questionable whether these tests are suitable in developing countries. Indeed the real criticism of the expatriate banks is that they transplant lock, stock and barrel these banking canons into the developing countries without appreciating the structural differences between the developed and the developing countries. A few examples of this inadequacy may elucidate this point.

The expatriate banks emphasize short-term lending and do not consider medium and long-term lending as coming properly within their sphere of operations. They do not engage in mixed banking. In developed countries with well developed and integrated capital markets and financial intermediaries, there would be no quarrel with this practice since the gaps the banks fail to plug in the financial structure will be plugged by these other intermediaries. But even in the developed countries where there are alternative lending institutions, the commercial banks nevertheless undertake mixed banking and grant medium and long-term credit to a large extent. Yet in Nigeria, as in other developing countries where the expatriate banks dominate the banking system and at times are the only effective source of credit, they concentrate their lending on the very shortest end of the spectrum. For instance, during the period 1963-1968, the expatriate banks in Nigeria granted 80 percent of their loans with maturities not greater than three months, compared with 41 percent of the loans granted by the indigenous banks. Since they concentrate on loans with the shortest maturity, the expatriate banks play disproportionately minor roles in granting loans with longer maturities, in circumstances where there are no developed capital markets for medium and long-term funds and where emphasis should have been on multi or all-purpose banking.

Secondly, the banks emphasize short-term, self-liquidating assets as virtually the only acceptable collateral in circumstances where they are practically non-existent with the indigenous population. In addition they do not consider real estate as an acceptable security even when the legal obstacles pertaining to title and alienation of land can be overcome. As Newlyn and Rowan once commented, "Africans tend to offer mortgages as security for advances, and this is not the type of security which British bankers ever regard with much favor." Thus, it is clear that the apparent discrimination by the expatriate banks and their alleged inability to provide the increasing credit required by citizens of the developing countries stems primarily and principally from their different orientation and the institutional limitations in the developing countries.

The results of these defects for the indigenous business potential are a lack of bankable assets, low creditworthiness, low business morale, an underdeveloped banking habit and perpetuation of the small size of family business units in the developing country. The expatriate banks pushed by caution and the claims of liquidity, eligibility, and profitability, and by their close connections with overseas markets and expatriate concerns, lend little to indigenous enterprises who are therefore driven to the usurious local moneylenders or to expatriate businesses who, understandably, are reluctant to finance their competitors.

Indigenous banks. It is significant that the above problems confront indigenous as well as expatriate banks in developing countries. It may

be claimed for indigenous banks that they are better equipped than the expatriate banks to deal with the indigenous population. Because of their closer contact with and intimate knowledge of the community, they can better provide the type of banking facilities suitable to the indigenous population. As lenders they are more likely than the expatriate banks to undertake risky transactions, and to make small and medium or long-term loans, because of their closer social and business contacts with the people which, in the absence of adequate collaterals, will facilitate the selection of clientele. As mobilizers of savings, they can appeal to the people more directly, and where possible, adopt unorthodox methods; and because of their social and business commitment, they are in a better position than the expatriate banks to combine the provision of banking facilities with the education of the businessmen. These are all plausible and commendable. They explain the conclusion of the World Bank Mission, previously referred to, that the responsibility for the provision of increased and increasing credit facilities required by Africans lies with African banks. As I showed above this was the rationale for the establishment of indigenous banks in Nigeria, and I contend that it is the explanation for the increasing takeover or even nationalization of banking in developing countries. It should, however, be pointed out that the mere fact that banks are indigenous banks does not necessarily make them immune from the institutional limitations in the system, nor absolve them from the dual and conflicting obligations which any banker in his daily operations undertakes. These obligations are owed to the depositor for maximum liquidity, and to the shareholder for maximum profitability.

Indigenous Banks And The Role Of Banking

The history of indigenous banking in Nigeria is extremely instructive in this respect. The operations of indigenous commercial banks in Nigeria were subjected to three enquiries in 1948, 1956 and 1962. The revelations of mismanagement, inefficiency, under-capitalization, wildcat banking and mal-investment of public funds, did not inspire much public confidence, and the resulting public scandal still leaves a scar on indigenous banking which ultra-nationalism has not been able to eradicate. This partly explains why, in spite of patronage by government and governmental agencies, the indigenous bank established as a result of the alleged discrimination by the expatriate banks have not been able to capture more than one-fifth of the total banking business in the country. It also partly explains the absence of privately owned indigenous banks in Nigeria. The environment is not one where any Nigerian would like to risk his capital and reputation in banking. It also explains why indigenous banking relies wholly or predominantly on the state.

Any bank, whether indigenous or expatriate, must maintain reasonable liquidity and sound practices to retain public confidence and reasonable profits and continue in business. Is it realistic to assume that a bank can fulfill the expectations and demands of customers in a developing country while also maintaining its financial integrity? Is banking to be seen as a social service or a commercial enterprise? Is the social aspect of banking incompatible with banking as a commercial enterprise? It is not the purpose of this paper to provide answers but rather to pose the questions. It seems to me that in all the debate that has been going on about the measures to stimulate economic development in the third world the proper role of commercial banking has been neglected, and the above basic questions have neither been asked nor answers attempted.

Through the encouragement of the World Bank and the International Finance Corporation, regional and national development banks have been established in various parts of the world, and this stimulated discussion of the role of development banks in developing countries. Partly as a mark of independence, and partly encouraged by the International Monetary Fund, central banks have been established in newly independent countries; this seems to have settled the age-old-controversy as to the advisability and role of central banks in developing countries. But there is no comparable international institution concerned with assisting the growth of commercial banks, or even with the discussion of grass roots banking and the proper role of commercial banks in developing countries. It seems to me that it is this neglect which has led to the misguided charge of discrimination against expatriate banks in developing countries. Unless the nature and role of commercial banking in developing countries is properly understood and appreciated, there is a danger that these countries may feel that by indigenizing commercial banks they are acquiring money, rather than an institution whose primary objective is to strike a balance between social obligation and commercial viability consistent with the apparently conflicting but not irreconcilable obligations to the depositor and the shareholder.

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Central Banks: Their Regulatory Functions

V. V. Bhatt

[Central banks will improve the opportunities for economic growth to the extent that their control over monetary phenomena can, with appropriate policies, be used to support development objectives. The conduct of the Japanese central bank during the past two decades may serve as a useful model for developing countries.]

A well-developed credit system is inherently unstable. It rests on confidence and trust, and if trust is lacking it can just shrivel up. It is unstable in the other direction also; when there is too much "confidence" or optimism, it can explode in bursts of speculation. To make the credit system work smoothly, it needs an institutional framework, which can restrain it on the one hand, and support it on the other. This was the role that was conceived for central banks. In the theory and practice of central banking, thus, it is the regulatory role of the central bank that is emphasized.

Regulatory Functions: Limitations

The central bank's effectiveness in regulating credit depends upon the geographical and functional scope of the banking system and the extent of the latter's dependence on the central bank for assistance. If the banking system's functions are restricted to meeting the credit needs of only modern industry and trade, the central bank's power to regulate credit allocation among the other sectors

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would be limited, as it has been in many countries. The funds in the so-called unorganized market can be switched from one line to another in search of speculative profits and the central bank would not have much control over interest rates or lending patterns. Of course, the overall supply of funds and overall money supply would still be within the powers of the central bank to regulate, but the lending pattern and the yield pattern in sectors other than those covered by the banking system would be outside the central bank's control. The availability of credit outside the system would affect the central bank's control on the modern sector also.

In such a situation, the central bank faces a dilemma. Too tight control on the banks may mean starving the modern sector of required credit, while lack of such control would mean supply resources to the unorganized market over which the central bank has no control. This is, doubtless, one of the reasons why credit creation by the central bank turns out to be excessive in some developing countries.

There is another reason for a similar situation to arise, and that is the excessive reliance of the government on central bank credit. There is some relationship between money supply and output, and the central bank would be in a position to grant credit to the government to the extent required for generating the desired increase in money supply. However, being short of resources in relation to mounting needs, governments tend to rely on central bank credit to an extent that generates excessive increases in money supply with inflationary consequences. In a situation like this, a central bank's ability to control and regulate credit again becomes limited. Of course, it can tighten credit and make it costly for the modern private sector; but then this tends to affect output of this sector adversely and thus aggravate inflationary pressures.

Regulatory Function: Policy Instruments

The central bank's ability to regulate credit depends upon (a) the extent of reliance of the modern sector on bank credit, (b) the reliance on trade credit from the modern sector of the sectors linked with the modern sector, (c) the dependence of the banks on central bank assistance and (d) the policy instruments available to the central bank.

In a large number of developing countries, with a rapidly expanding modern sector, the latter does rely on bank credit to a significant extent. In addition, large modern enterprises extend trade credit to sectors linked with them. The banks' dependence on central bank credit depends on alternative sources of funds. Where branches of international banks are dominant, their reliance on central banks may be marginal. But where the inflow of banking funds is controlled and

the modern sector is rapidly expanding, banks may find their own resources inadequate periodically to meet the credit needs of the modern sector. If the central bank has powers to vary the liquidity ratio of banks, it can make the banks marginally dependent on central bank credit.

In such a situation, the central bank can regulate both the cost and the availability of credit to the modern sector as well as the sectors linked to it. It can raise the cost of its credit to the banks which, in turn, would raise their rates to the borrowers. The increased cost of borrowing can be made effective by restricting the banks' lending power by raising their net liquidity ratios - that is ratio of cash and liquid assets minus central bank borrowing to total deposits. The central bank can also regulate credit to specific sectors by means of selective credit controls operated in the context of overall credit control. Since it has sanctions, it can ask the banks to raise margin requirements as well as the cost of credit for advances to specific sectors which require separate regulation, for example, in a situation of speculative inventory build-up of commodities in short supply. It can, likewise, encourage banks to lend to specific sectors by linking its own credit to banks with the latter's credit to such sectors.

The traditional central banking instruments like open market operations are unlikely to be successful in view of the narrowness of security markets. Bank lending rates, coupled with powers to vary the reserve ratio as well as the net liquidity ratio, are likely to be much more effective. Depending on the contact of the central bank with the banks and the latter's dependence on it, moral suasion can also be quite effective in regulating overall credit as well as its patterns. The real limitations on the central bank arise as a result of (a) excessive reliance of government on central bank credit and (b) lack of integration of money and capital markets. The second limitation would give way with the geographical and functional extension of the role of the banking system.

Structure of Interest Rates

Central bank policy with regard to the interest rate structure has considerable impact both on inducing savers to invest in bank deposits and other financial assets, and in bringing about a rational allocation of resources. Savers can be induced to keep their savings in the form of financial assets if the yield on such assets is comparable to that on physical assets like real estate, gold and commodities, after making allowance for risk premia and transaction costs. If there is reasonable price stability and comparable yields on financial assets, it is possible to raise the rate of financial saving and bring about a greater integration of the money and capital markets.

For rational allocation of resources, the interest cost to borrowers should reflect the relative scarcity of capital. The rate on bank credit as well as the interest cost of other forms of borrowing should, therefore, be related to the yield on real investment that is consistent with the attainment of growth targets. It appears that in most of the developing countries, the lowest rate - that is the rate on one year deposits - should not be lower than 6 percent per year, and the annual rate of return on agriculture and industrial projects should not be lower than 15 percent. The other rates should fall within this range depending on risk premia, transaction costs, marketability and liquidity attached to specific financial instruments. This rate structure should be as suggested plus an additional percentage corresponding to rates of inflation. The central bank can make such a structure effective by prescribing minimum rates on bank deposits and bank loans.

Exchange Rate Regulation

In addition to being banker to the banks and government and to issuing currency, the central bank also has the responsibility of managing the foreign exchange reserves of a country and maintaining not only internal but also external stability.

In this context, it is the central bank's function to fix an approximate exchange rate for the domestic currency in terms of gold or foreign currency, and support that exchange rate through the management of the foreign exchange reserves. From the point of view of balance of payments management as well as rational allocation of resources, it is important to have an appropriate exchange rate policy. There is a tendency at present to support the exchange rate at a level fixed earlier, even when it has become unrealistic. Such over-valuation of the domestic currency in terms of foreign currencies distorts allocation of resources. Import-intensive projects appear to be cheaper than they really are, which leads to a wasteful use of one of the scarcest resources - foreign exchange. This results in balance of payments problems, which are aggravated by the implicit disincentive for exports. Trade and exchange controls then have to be used for managing the payments situation, with all their direct and indirect distorting effects on allocation of resources.

Just as the interest structure should reflect the relative scarcity of capital, the exchange rate should reflect the relative scarcity of foreign exchange. There are cases, however, where developing countries pursue a policy of dual exchange rates which does not allocate foreign exchange according to a single measure of scarcity. The reason may be that a single exchange rate with extensive capital or other controls to maintain that rate would be more distorting than a dual rate. Where such a dual exchange rate seems desirable, it could be implemented by having one fixed rate for certain competitive export items

and essential imports, while having another floating rate for certain new export items which may require initial encouragement and for non-so-essential imports. The floating rate would have another advantage also. It would indicate the extent of change required in the fixed rate, and thus enable a country to change its fixed rate when it is essential to do so from the balance of payments point of view.

Basic Limitations of Monetary Policy

Central banks used to have effective monetary policies in an environment which now no longer exists - in which governments had, by and large, balanced budgets and exchange rate stability was the primary concern of policy. With other domestic objectives like full employment and development becoming dominant, governments have become aware of the monetary implications of fiscal policy. Monetary policies thus have become secondary to fiscal policies, and the latter have proved to lack the flexibility of the former. On the other hand, with multi-national firms and international banking, the international monetary system has evolved into a credit system. Today, this international credit system is as unstable and fragile as the domestic credit system had earlier become - evolving from a currency system.

For both these reasons, a central bank is no longer "central", in the domestic sphere. Its flexibility is restricted by government fiscal policy, and in the international sphere by an international credit system. The international system now requires a "central" bank to manage a system that is inherently unstable. But since in the domestic system, governments are not willing to give the power of control to their central banks, the question is: how will they entrust the power to regulate the institutional system to an international central bank? This is the dilemma with regard to reform in the international monetary system.

Central Banking in Japan

Monetary policy in Japan has been very effective. The financial structures of many developing countries are more likely to resemble that in Japan rather than those of most Western countries because their stock markets, and the use of equity capital in general, will grow only slowly, whereas banking systems are already in existence and can more readily expand their branches and their level of activity. Corporations - certainly the domestic companies - will not have the capacity to finance as large a share of their expansion from internal funds as the Western companies possess. So, like Japan, economic growth in these countries is likely to depend to a large extent on a banking system which is, relatively speaking, responsive to the tools of central bank management. It is therefore

worthwhile to know the factors behind the success of the Japanese monetary policy.

The rate of household saving in Japan is very high - almost double the rate in the U. S. A. , France or Germany. During 1960-69, this saving formed 19 percent of disposable income; the corresponding rate was 9.6 percent in the U. S. A. , 10.3 percent in Germany and 10.0 percent in France. A much more important factor was the dominance of financial saving - more than 11 percent of disposable income - and the dominance of bank deposits in financial saving. About 80 percent or more of financial saving was in the form of bank deposits or bank debentures. Thus savings of the household sector are mobilized primarily by the banks, and it is they who finance investment in the economy. Because of the high rate of investment (about 40 percent of GNF) and its rapid growth, the business sector is able to finance only 46 percent of investment by plow-back of profits; of the rest, more than 80 percent is financed by the banks. Straight issues of stock and foreign borrowing are of marginal significance.

The banks - the big city and long-term investment banks - finance mainly large enterprises and their projects, and the large enterprises finance - via trade credit - the small firms. Thus, the small firms too are indirectly financed by the banks. Banks have been willing to provide even long-term credit by taking big risks involved in low cash ratios, "operations at levels of illiquidity that would drive an English or American banker into a state of permanent neurosis." This is made possible by the willingness of the central bank to provide credit to banks - which, at the peak of a boom, rises as high as 10 percent of the banks' loans and investments. Government accounts are generally balanced and tend to show a surplus during boom periods - expenditures lagging behind revenues.

This structure enables the central bank to take effective measures to regulate credit in times of emerging payments problems, even before the inflationary pressures become serious. The policy instrument, largely, is the management of overall credit volume. The Bank of Japan is able not only to control its own supply of funds to the banking system but also by other means to have a strong influence on the expansion of loans by individual banks. In addition to moral suasion, a number of monetary tools are used such as reserve requirements, import deposit requirements, a complicated discount rate structure (with penalty rates partly dependent on the amount of borrowing of the individual bank) and limits set on loans and investments of each bank.

Because of the Japanese economic and financial structure, the monetary restraint measures have very quick effects - the lag is hardly a few months. Inventory investment gets reduced first along with imports, and the restrictive effect spreads from large firms to

small firms through the effect on trade credit. Since the results of monetary restraint are attained quickly, there are generally no longer-term dampening effects on fixed investment and growth. The adoption of restrictive monetary policy has quick and sharp effects especially on inventory investment (with high import content) and because of this, the elimination of the restrictive measures is also effective in giving rise to new rapid expansion. Thus, the central bank is effective both ways - in curbing the boom as well as in effecting a quick revival of business activity. In no other country has monetary policy been as effective in both directions.

Until recently, Japanese policies, monetary and non-monetary, have proved their value over the postwar years, not only in sustaining overall growth but in their ability to reduce cyclical fluctuations and deal with external payments flows without resorting to significant rates of inflation. An important factor for success in this field as well as in others is the strong cooperation between business and government, which is nearly unique to Japan and is affected by its cultural traditions. But this success is also due to its financial structure. If the governments of developing countries are prudent and responsible in their management of the banking system, Japanese experience indicates that the tools of monetary policy can be effectively utilized.

(Unpublished manuscript)

Rural Savings Mobilization

Gordon Donald

[The financing of rural credit needs will require special efforts to mobilize rural savings deposits if rural credit is to become a self-sustaining operation. Banks have not shown much interest in this. Some experiences with rural savings attraction, and some innovative approaches are described.]

By and large the commercial banks of developing countries have been most active in urban centers. Their borrowers have most often been commercial enterprises or industrial firms, and secondarily the larger scale agricultural producers selling in urban or foreign markets. Their depositors have been similar; and where the urban banks have expanded into the small towns with rural branches these have tended to be relatively minor operations. There are exceptions to be discussed below, but this has been the general pattern.

On the lending side, a lack of interest in credits for small or medium sized farmers or small rural enterprises is readily explainable by the high administrative cost (per amount loaned) of the small loans that most such borrowers would require, and by the comparatively high levels of delinquency in repayment that have often been encountered in small-farmer lending. Given that small rural loans are necessarily high in cost and may be risky, they could perhaps become profitable if the interest rates charged on loans were high enough to cover such costs and risks. But most banks work under some constraint here, whether because of laws or regulations specifying a maximum interest rate or because they apply, as a matter of

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policy, the same rates that are charged to other customers whose larger loans and liquid collateral provide greater probability of profit. So banks generally see rural lending as unlikely to be profitable, and they also tend to think it unlikely that the inhabitants of rural areas have much savings capacity that could be mobilized in the form of savings deposits. The banks therefore do not expect much from the countryside: educated employees in their rural branches may feel themselves in exile, and try to maneuver their way back to the city rather than try to find solutions to peculiarly rural problems. Similarly, rural residents, other than the rich, do not expect much from the banks.

This lack of interaction with the bulk of rural residents would not be a problem if there were little that a commercial bank could do in the development of rural areas, and if there were other institutions better designed to do what is needed. But these assumptions may be questioned: increasingly development planners are giving higher priority to agriculture than was usual a decade ago, and increasing interest is also being shown in the lower-income population—most of whom live in rural areas. Both trends point to a need for greater institutional credit in the countryside, but the kinds of financial institutions that might be better adapted to the rural environment are hard to find. To some extent the governmental agricultural credit programs have been filling some of the rural needs for production credit; but these agencies tend to use up public capital and act as a drain on the state budget. They do not often accumulate capital from their lending profits (subsidies are more usual); and they do not attempt to solicit deposits, as would a commercial bank, so their operations are not really sustainable in the same way. If rural financing is to escape from the welfare expenditure category and become a self-sustaining operation (assuming the lending problems, not discussed here, can be overcome), then rural savings must be mobilized. Potential savers must be persuaded to make financial deposits. If commercial banks could become convinced that substantially more deposits can be found in rural areas, and that efforts to attract them could be worthwhile, the activity is one where bank experience and expertise would be valuable.

Attraction of rural deposits. Many economists have come to believe that rural savings capacity has been seriously underrated. The success in eliciting savings deposits from poor farmers that has been achieved by a number of credit unions and other types of cooperatives shows that it can be done with the right kind of leadership and organization. However, the interest rates that most banks pay on savings deposits is relatively low, less attractive than it might be if an active search for deposits were to be made. Another obstacle in many countries is the rate of inflation, which erodes the value of savings when held in financial form. If inflation is to continue, the solution is to

pay interest on deposits at a rate that will not only exceed the rate of inflation but provide the depositor with an attractive income. This has seldom been attempted by banks, however, in part because the upper limitations on loan rates place a (lower) ceiling on what a bank is able to pay its depositors. Thus one important means for attaining a greater mobilization of rural capital would be for national policy to permit a general rise in interest rates with or without inflation, but especially when it is a problem. And since rural lending tends to be relatively high in cost, a higher rural lending rate would be appropriate. (The opposite is more often found, in that rural-urban differentials are more likely to include a concessional lower rate on loans to farmers.)

Another approach is to provide incentives within the banking system for expansion of rural activities. As applied to lending, this could include preferential rediscount rates at the central bank, portfolio requirements, and tax concessions related to the proportion of banks' loans to defined categories of borrowers. Conceivably, such methods might be adapted to encourage increases in rural deposits, thereby giving banks a stimulus to seek new, perhaps unorthodox solutions to the unconventional problems they may confront in dealing with traditional-minded rural residents. This last idea is virtually untried.

A third approach is to charter small rural banks which are permitted to lend only within a circumscribed area, and which must assemble local private capital if the bank is to come into existence. This has been done in the Philippines: capital raised in this way has been matched by equal tranches of interest-free public funds, and preferential rediscount rates are applied. As of 1972, 539 such rural banks had been established over a period of about seven years. Some 90 percent of their loans had gone to agriculture; repayment rates were relatively good (as of 1972 only two percent of outstanding loans were under litigation); and by and large they have been profitable and growing enterprises.

More recently the government of South Vietnam has begun to charter rural banks on the Philippine model; they are still too new and too few for their success to be judged, but at least they have shown a promising growth rate. Some of the means they have used in aggressively seeking to attract savings deposits may be useful elsewhere. First, they pay relatively favorable interest rates: 17 percent for savings deposits, and 17-24 percent for time deposits of 1 to 12 months. They also send their employees into nearby villages to make door-to-door visits soliciting deposits, and this includes a special effort to get savings started among school children. Female clerks, often chosen for good looks, are instructed to welcome visitors to the bank and urge them to try making a deposit. A lottery with high pay-off levels (about one in three each year) is organized: in return for accepting a lower rate of interest the depositor is given a lottery ticket, and the value of his payment if he wins is proportional to the amount of his savings deposits.

In other countries various devices (other than interest rates) have been used to encourage savings deposits. In the Philippines and Uganda, insurance on deposits eliminates savers' risk of bank failure. In several countries with high rates of inflation, including Brazil and Chile, the value of savings deposits is modified in accordance with changes in price levels. Uganda, Costa Rica, and Bangladesh have used mobile units to collect rural savings deposits. A life insurance feature, with beneficiaries receiving some multiple of the savings of the insured on deposit at the time of death, is supplied by some credit programs, e. g. in Bangladesh and the credit unions of Latin America. In Colombia, depositors are eligible for educational scholarships which are drawn daily from lists of savers in the Agricultural Bank. Some countries offer tax concessions on income from savings deposits, e. g. Taiwan, South Vietnam. And a number of countries besides South Vietnam, such as France, El Salvador, Iran, and India, have lotteries in conjunction with savings accounts. Generally speaking, use of these devices has been the result of government decisions that the encouragement of savings was desirable, rather than an expression of private initiative as seems to be the case in South Vietnam.

Still another approach was attempted by the government of India in 1969 when it nationalized 14 large commercial banks with a total of 4,134 branches. One of the purposes was to get them to increase their rural activities by a greater degree of compulsion than that which had been tried in preceding years when the banks were private; however, they were to remain essentially commercial banks and not become special-purpose state enterprises of the usual farm credit program variety. It is difficult to judge how far this experiment has succeeded in eliciting rural deposits, but a few summary figures are of interest. As of December 1972 the number of branches of these banks had risen by 89 percent to 7,802. In the same period the branches of the non-nationalized private banks increased by 84 percent from 1,319 to 2,434. Total deposits in both groups (no breakdown given) grew from Rs. 46.46 million in June 1969 to Rs. 88.30 million by June 1973. All these rates of increase were clearly greater than in preceding years. While many of the new branches appeared in towns near cities rather than in truly rural areas, and the deposit increases were not concentrated in the new branches—still, the stimulus had some effect, and it seems to have stirred a more active competition among banks generally. Time will tell whether this impetus will continue; and readers may draw their own conclusions as to the desirability of using such a method.

Intermediary savings collection. The most impressive collections of savings deposits from relatively poor rural people have been obtained by cooperative organizations rather than banks. Outstanding in this respect are the farmers' associations of Taiwan and South

Korea in the postwar years. The National Agricultural Cooperative Federation of South Korea had accumulated \$291 million in savings deposits as of 1971; \$69 million of this originated with relatively small farmers (average income below \$200 a year), a sum equal to about 30 percent of the NACF's agricultural loan funds. In Taiwan, the farmers' associations had amassed a total of \$124 million in savings deposits as of 1970, about \$38 million of it from farmers with small holdings (following land reform) and modest incomes in the vicinity of \$1,000 a year; these sums compare with a \$115 million value for outstanding loans of the farmers' associations in the same year. In both countries farm productivity has been rising, and the two organizations mentioned have been the main sources of agricultural credit. High capacities to save have been found in other areas on a smaller scale - when a savings effort was organized. Of unusual interest are the savings mobilized in the Comilla cooperatives of Bangladesh, a country with farm incomes averaging \$40-50 a year. The total accumulated in three counties (thanas) over the decade prior to the outbreak of the civil war in Pakistan was about \$450,000 (Rs. 2,166,000) — not large in comparison with capital needs but impressive under the circumstances.

These instances are not typical; most cooperatives are not very ambitious in their efforts to collect savings deposits. But the success stories do illustrate that far more is possible than most people have thought. The moral for banks might be stated as follows: the potential saving capacity in low income rural areas seems to exist, but it may require a kind of approach that the banks are not well suited to use by themselves. A local organization like a cooperative can more readily reach villagers and may better inspire their trust; and if the leaders of such organizations are motivated to collect savings, the results may be surprising. Banks, however, can do business with cooperatives, using them as intermediaries not only in group lending (not unusual) but also in collecting savings which can then be deposited in the banks. This last has seldom, if ever, been conceived as a serious objective for the banking system. What is suggested here is not that such a method will be a quick or problem-free answer to the need for increased rural savings but that it may merit further exploration.

[Adapted from a book on small farmer credit, under preparation by the editor, in connection with A. I. D. 's Spring Review. See box, p. 4.]

HEALTH PLANNING



A PATIENT RECEIVING INTRAVENOUS
FEEDING IN THE CHILDREN'S WARD AT HACHETTEPE
MEDICAL CENTER, ANKARA, TURKEY.
(PHOTO: U. S. AGENCY FOR INTERNATIONAL DEVELOPMENT)

Can We Reduce the Cost of Medical Education

Brian Abel-Smith, Lars Ekholm,
Herbert E. Klarman, and Vicente Rojo-Fernandez

[The authors were members of a group of consultants assembled by the U. N. World Health Organization (WHO) that met in Geneva in 1971 to discuss the economics of medical education. They point out that establishing a new medical school in a developing country is a major decision, calling for a detailed study of the long-term economic and financial implications and a full consideration of the available alternatives.]

Before deciding to establish a new medical school it is necessary to forecast the pattern of health services in the country during the next 20 to 40 years. It may well be 10 years after the decision before the first graduates are ready to practice, and 20 years before the output of physicians makes an appreciable contribution to the total manpower of the health services. What may be at stake in making this decision is nothing less than the extent and character of the health services of the country for the next generation or two. The key questions are: (a) How much importance should be attached to preventive health care in its widest sense? (b) Will it be economically feasible for the country to provide enough "first-contact physicians" for the whole population? and (c)

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How far should hospitals and other supporting services be developed?

Decisions on these three questions will determine the number of doctors required and the nature of the training they should receive. Once these questions are answered, it is still necessary to consider what steps the government is prepared to take to ensure that the physicians it trains do not emigrate and are induced to work in all parts of the country where medical manpower is needed to meet health service targets.

Costing Medical Education

To calculate the cost of providing a student with basic medical education, the expenditure on such education is divided by the number of students completing the course annually. The relevant expenditure comprises the operating costs, the depreciation of buildings and equipment, and the interest charge on the capital invested in the medical school. In practice the calculation presents a number of difficulties. In any medical school the teachers are often involved in patient care and research, and may spend part of their time teaching post-graduates and other medical personnel such as dentists, nurses, and technicians. They may even provide continuing education to physicians. The time they spend on undergraduate teaching must accordingly be estimated by means of a questionnaire or by observation. In a teaching hospital, the average cost of patient care is usually higher than in a non-teaching hospital, and it must be ascertained how far this is caused by undergraduate teaching commitments and how far by the more specialized care given in such hospitals. Any part due to teaching must be included in the educational costing.

Annual expenditures must be based on the costs accumulated over the entire length of the medical course, including those of students who have dropped out before gaining their qualifications. In a strict economic computation of the cost of medical education a sum would need to be included for the earnings forgone by students during their medical course. When this is included, the cost of their food and accommodation should be omitted. When the cost of educating a physician has been calculated, it may be pertinent to relate this sum to the other purchases it could make, such as the number of nurses or health auxiliaries who could be trained, the books that might be bought for libraries, the water supplies that could be installed, or the number of houses that could be built.

The table shows, for a number of countries, the cost of educating a student until he or she graduates from medical school. The earnings forgone while attending school are not included. There are wide variations in cost, due largely to differences in the value of equipment, in the number of students, and in the cost of food and accommodations.

The annual cost per medical student can be translated into cost per medical graduate by taking two factors into account. The first is the duration of training: the annual cost is multiplied by the number of years it takes to complete the course. The second factor is the dropout rate, which serves to raise the cost of training a successful graduate.

COST OF UNDERGRADUATE MEDICAL EDUCATION

Year of estimate	Location of medical school	Per capita national income in 1966 (US\$)	Annual cost per student (US\$)	Total cost per graduate (US\$)
—	Colombia (Cali)	256	1817	24,600
—	Ecuador (Guayaquil)	190	331	2,844
—	Ecuador (Quito)	190	166	1,233
—	El Salvador	241	1950	14,500
1965-66	England (Provinces)	1543	3786	24,556
1965-66	England (London 1)	1543	3139	15,683
1965-66	England (London 2)	1543	4001	20,051
—	Jamaica	431	2400	24,000
—	Nigeria (Ibadan)	68	4950	33,600
—	Senegal (Dakar)	183	10500	84,000
1970-71	Sweden	2571	5471	30,091
—	Thailand	112	1618	6,660
—	Uganda (Makerere)	90	3080	26,000
1959-60	USA	3175	4491	19,630

The cost of a medical school can be of major importance in determining the ultimate level of medical manpower in a country. But it is not only these costs that need to be considered. The decision to start a medical school is a major investment decision that generates not only a flow of annual running costs but also, a few years later, an output of expensively trained personnel for whom employment and supporting facilities will be needed if the original decision is to be justified. It is astonishing to note that many countries are ready to face the high costs of training a young physician but appear to be unaware of the importance of supporting staff, such as nurses and medical auxiliaries, without whom a doctor cannot work efficiently.

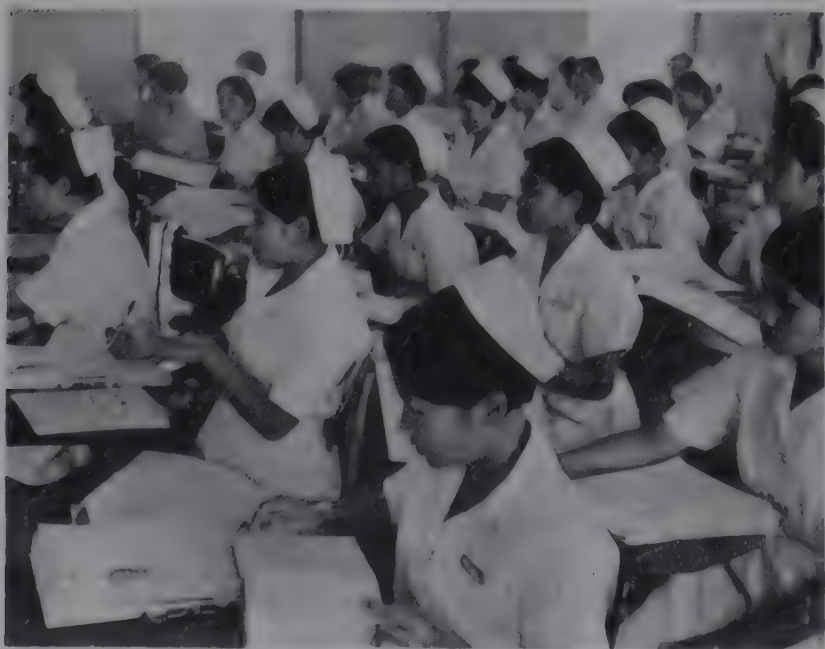
Deciding On The Establishment Of A Medical School

The decision to establish a medical school is usually based on two considerations: (1) that an increase in the number of physicians is required, and (2) that it is better to establish a new school than to expand one in another part of the country or in a neighboring country. In most cases the calculation of physician requirements is made by applying some standard or desired ratio of physicians to population, present or projected. When the supply of physicians, present or projected, is subtracted, the result is the net requirement for additional

physicians. Both elements in the equation - total requirements and total number available - should be carefully examined.

The standard ratio is usually derived by comparison with some other country, which has its own unique socio-economic conditions, or is taken from a recommendation by an expert group. For example, a report in 1964 of a WHO group of consultants on the establishment of a medical school in Syria approached the problem in the following way: "The ratio for the country . . . is one physician per 5000 population irrespective of the variation in distribution . . . It is difficult to establish a standard ratio of physicians to population acceptable on a worldwide basis. Europe carries ratios in almost every country of one per 1000 or less. In the Middle East as a whole, the ratios vary from one per 7000 to one per 40,000. It seems reasonable to set a figure of one physician per 2000 population for the Syrian Arab Republic as a whole for the goal in the years immediately ahead." Another example is a 1966 WHO report on the establishment of a medical school in the University of Zambia, which concluded that a standard of one per 5000 in 1986 "may be regarded as good by African standards . . . but is far short of what is desirable."

In contrast, we wish to affirm that the feasibility of applying a standard ratio depends on the country's standard of living, present or projected, as measured by per capita national income. The higher a population's standard of living, the more it can afford of everything, including health services. Further, there is more than one way of providing a given set of health services. Persons with diverse training and skills can be teamed together in various ways. The physician can be relieved of certain administrative duties by a clerk and of certain technical functions by a technician or assistant. More reliable and faster transport can enable the physician to devote his time more fully to professional tasks.



Over 700 midwives and 150 nurses train each year at hospitals and other locations throughout Thailand. Graduates work in rural areas of northeast Thailand providing family planning and health services.

The most important step in appraising the desirability of applying a given standard physician-to-population ratio in a particular situation is to examine the consequences. In this process several questions arise. Is implementation of the ratio feasible from a manpower standpoint? Will there be an adequate income for the physician once he is trained? Are the physicians likely to work where they are most needed by the society which sponsors and finances their medical education?

Feasibility From A Manpower Standpoint

To embark on medical education the student must have attained a sufficient standard in general education. How many students in the country have reached this level of education, and what claims are made on the total supply by competing disciplines such as public administration, engineering, and teaching? Where there is a limited pool of students with a sufficient level of education, the need for additional entrants to medical education must be constantly balanced against the need in other fields. If an excessive proportion of the higher education effort of the country is devoted to medical education, it may result in many doctors eventually abandoning the practice of medicine to accept senior jobs in public administration or other posts for which persons with higher education are greatly needed. If this occurs, the country's higher education has been misdirected and the medical education is being largely wasted.

After successfully completing the medical course, a great majority of graduates will enter practice. The effectiveness of a practicing physician depends to a great extent on the work of supporting staff, on the availability of drugs, supplies, and equipment and, for certain types of care, on the provision of hospital beds. The resulting costs, usually several times the earnings of the physician, must be allowed for if the physician is to provide optimum service.

For each year, beginning with the medical school's first graduating class, it is possible to project the total annual health service expenditure involved if all the graduates of the school were employed in the country's health services. This sum is an additional charge on future health services expenditures and can be readily converted into a percentage of national or local budgets or of the gross national product (GNP). In none of the WHO reports that we have seen was this long-term cost mentioned, although it is the most important cost commitment involved if the original aim underlying the decision to establish a medical school is to be attained.

One WHO study found that certain countries with a low national income per head spent 2.5-3.7% of the GNP on health services. Adding what is now spent on health services to the extra expenditures

associated with the graduates of the new medical school will give a reasonable indication whether the additional expenditures are feasible. What is involved here is a combination of what a country can "afford" to spend on health services and what it "chooses" to spend. Much will depend on whether national income per head is rising, and on the proportion of the growth the country is willing to divert to health services. Whether economic growth takes place or not, a good deal will depend on competing claims on the government budget - for example, defense, education, or general development - and on competing claims pressed on behalf of consumer expenditures such as food and housing. In estimating relative benefits, the value system of the country is an important factor.

Additional health services can contribute to economic growth, to social development, and to the general well-being. But so can other expenditures, either public or private. The real cost of an expansion in health services is the withdrawal of resources from other possible uses such as education or housing. Therefore the question is - what priorities does a country wish to establish in its development program? An improvement in levels of nutrition in some countries can make a contribution to health that compares favorably with that made by expanded health services.

Place of Practice

Too often graduates of medical schools leave to practice medicine in other countries - particularly countries with higher standards of living and wider professional opportunities. Some go abroad for graduate training and return home only to find that the local facilities are not consistent with the type of training they have received. If the physicians cannot adapt at home, they may emigrate in search of wider professional experience and higher levels of remuneration than can be provided in a developing economy.

Obviously when the physician emigrates to another country the benefits of his medical education accrue elsewhere. In effect, a poor country, having financed the medical education of its nationals, is giving a substantial subsidy to a wealthier country. The essential point is that medical qualification enables the physician, a member of a highly mobile profession, to enter a world market in which the financial and other professional rewards differ markedly among countries. Thus a country may be ill-advised to send its doctors to a richer country for post-graduate education. It may find it desirable to require a period of service in the home country of all who have passed their final examinations.

A less obvious diminution of the benefits of medical education in a country arises when the medical graduate stays at home but enters

private practice in the capital or some other large city. Throughout the world, cities attract private practitioners in great numbers, even when employment with higher remuneration may be available in the rural areas where physicians are badly needed. However, in many instances, physicians are unwilling to live and bring up their families in such areas. And the level of incomes obtainable in rural areas may be well below what the physician expects to get in the city.

The national physician-to-population ratio is a weighted average of the ratio in the cities and in the rural areas. The overall ratio can tell us nothing about the geographical distribution of physicians. If it were known that all or most of the new physicians would practice in the large cities, where the physician-to-population ratio is already relatively high, the policy of building a new medical school might lose a good deal of its appeal.

A number of devices are available for promoting a more equal geographical distribution of physicians. Among them is a required period of service as a general practitioner prior to admission to specialty training. Another is a period of medical practice in a rural area as a form of national service in lieu of military service. Still another, which is not alternative but complementary, is the establishment of adequate facilities for practice in the rural area, linking the physician closely with a regional medical center for professional purposes - referral of patients, continuing education, and consultation. A more controversial device is to require those who practice privately in urban areas to pay a monthly licensing fee if their training has been financed from public funds.

Alternatives to Establishing a Medical School

Expanding an existing school to serve several countries. If the analysis indicates that additional physicians are required, the question arises as to how and where they should be educated. Too little is known about the optimum size of a medical school or the effective constraints on its expansion. A very small school (say a class of 10) is obviously uneconomic, but the upper limit of the size of a school is not well established. Often enough we have been told that the output of existing schools cannot be expanded, only to learn later that the existing schools were in fact expanded. There may well be educational disadvantages in a large school and problems in using more than one hospital for clinical experience, but these difficulties must be viewed in the light of the relative costs of expanding an existing school and of developing a new one.

In examining the possibility of expanding existing medical schools, consideration should be given to schools in neighboring countries with similar cultural characteristics, as well as to schools in the same

country. Expansion of an existing school might be a better way to produce smaller increases in the number of physicians than the establishment of a new school, which would require a certain minimum number of students. Here the possible savings in future health service expenditure could be large. If the contemplated increase in physician output is small for several neighboring countries individually, but is sufficiently large in total numbers, a combined regional school might yield savings in operating costs. A combined regional school offers two further advantages. Firstly, it permits a larger "critical mass" for research on selected problems affecting the countries sponsoring the school. Secondly, it can serve as the center for supervising graduate medical training, thereby minimizing travel abroad in quest of such training and the loss of medical manpower that may ensue when training occurs in the more affluent countries.

Training lower-grade personnel. Should the analysis indicate that the cost of a new medical school is more than the country can afford, or that funds would not be available both for new physicians and for supporting staff, supplies, and facilities, it need not follow that the health services cannot be developed. A country that cannot afford to make the services of physicians available to virtually the whole population may still be able to provide a nationwide service in which the initial contact is normally with less qualified persons. Such health personnel are supported with more modest facilities and equipment than a doctor would require. Thus, many countries have promoted the training and use of "feldshers," medical and nursing assistants, and other categories of middle and lower level health personnel. Once a sufficient level of economic development exists, some of these countries progress to a service in which the primary contact for all patients is with a physician.

With a health service in which the primary care is generally provided by a person with less training than that of a physician, it is possible to achieve full coverage of the country much more quickly than with a physician-based service. This is not only because the first type of service is cheaper per unit of population served but also because shorter training periods are involved. A two-year course can produce its first medical assistants three years earlier than a five-year medical course can turn out doctors. A new school for medical assistants starting with 100 students per class can by the end of the first decade turn out 900 graduates from a two-year course, while a medical school would produce only 600 from a five-year course (in each case assuming zero attrition). Moreover, in a fully developed school there would be only 200 medical assistants under training compared with 500 medical students. Thus a medical assistants' course is not only quicker but also cheaper in terms of places required and all that this implies in buildings, equipment, and teaching staff.

There is a limit to what a trained person can accomplish in a remote area where facilities are scarce and transport is insufficient. What is not clear is precisely how much better a service can be provided by a fully qualified physician in such circumstances than by a medical auxiliary. The crucial question is whether a higher standard of diagnosis and treatment is justified by the higher cost and (as is likely to be the case in many developing countries) by the simultaneous denial of any service at all to a substantial proportion of the population. The relative contributions of the physician and the auxiliary in this special and restricted setting could be evaluated and quantified.

It is questionable whether it is even possible to secure the services of an adequate number of physicians in remote rural areas. The increasing underemployment of physicians in urban areas and the massive emigration of physicians from developing countries testify to the difficulty of creating a physician-based rural service. They testify also to the reluctance of governments to use harsh methods on their physicians - even those trained at government expense - to force them into the rural areas. A person with less training, who does not have skills that are as eagerly sought after in other countries, will accept service in a rural area more readily than does a physician, and he is more likely to remain there.

Buildings and equipment. Ideally a medical school should be close both to the rest of the university and to the hospital or hospitals where clinical teaching is provided. However, the high costs of building and running a hospital make it desirable, wherever possible, to avoid erecting a new one for the special purpose of teaching. It may, therefore, be necessary for the basic sciences department to be situated in the university, so that the laboratories and other facilities can be used by other groups of students, and to use a hospital or hospitals situated at a distance from it for clinical teaching.

Hospitals used for clinical teaching must be located in main population centers so that sufficient clinical material, both inpatient and outpatient, is available. Ideally, the hospitals that provide the facilities for educating medical students should also be used for training interns and residents. A certain amount of adaptation is needed to make a hospital suitable for teaching purposes - particularly the enlargement of the clinical laboratories and the provision of more lecture rooms.

Three to five hospital beds are needed per clinical student, plus the supporting outpatient, health center and other facilities that serve the surrounding community. Thus a school with 100 students in each of the three clinical years will need 900-1500 beds plus commensurate facilities for outpatients. Where this bed requirement cannot be

met by using one hospital, two or more will need to be affiliated with the medical school. The teaching requirement should not, however, be allowed to determine the facilities construction program, even though large groups of students may have to obtain part or all of their clinical experience at a distance from the medical school.

Where existing hospitals are used, all that is needed to establish a medical school is to construct buildings to house the basic sciences department and related facilities. A careful study should be made of ways to achieving the fullest use of space for different purposes. This will involve close examination of alternative time-tables for each year of the course. Only intensive study of this kind, taking into account the possible use of existing and new buildings by other university students and health personnel, can minimize the costs of construction and (even more important) operations, while ensuring the provision of sufficient space for lectures and seminars.

The principle of joint use is particularly important in planning laboratory facilities, which can account for as much as a third of the whole cost of a medical school. Instead of planning and using separate laboratories for the different specialties, the same laboratory can be used for various purposes and also for the training of both medical and non-medical students. Thus the planning of the medical curriculum in consultation with other possible users of laboratories, seminar rooms, and lecture theatres should be undertaken before the architect is called in.

In choosing equipment for the medical school, cost consciousness is particularly important; unnecessary duplication of apparatus within the faculty or the department must be avoided. Moreover, the cost of equipment does not end when it is purchased; it also needs to be maintained. In many countries expensive equipment is lying idle because insufficient thought was originally given to the problem of training and paying staff to look after it. On the other hand, it is particularly important that there should be a sufficient quantity of equipment to permit each student to become familiar with the apparatus he will be using later in his practice. In view of the shortage of technicians in developing countries, it may also be valuable to teach physicians to undertake minor repairs of equipment that is likely to be used in parts of the country where maintenance staff are not available.

Gifts of equipment to a new medical school may be offered from a variety of different sources - international, governmental, and private - from inside and outside the country. One of the more delicate tasks of the dean and his staff is to encourage gifts and grants for the general purposes of the school and for projects which contribute to its main work and to discourage those that are likely to distort the balance in its program. Perhaps the most difficult task of all is to refuse gifts

of equipment and buildings that will be expensive to use and maintain and of little relevance to the health needs of the country and thus to the curriculum of the medical school.

Books and periodicals. Both students and teachers need access to books and periodicals. It has been suggested that a medical school needs storage space for at least 100,000 volumes. Yet we know of no study of the use that has been made of a collection of this size by students or by teachers. Much depends on the scale and type of research undertaken in the medical school. Students may be expected to rely primarily on textbooks, and it is important that an adequate stock of the main textbooks should be available at modest cost and that those selected should be suited to the language and orientation of the school. Much use can also be made of carefully chosen readings reproduced on a scale sufficient for copies to be available to all members of a class.

The size of the library provided in a medical school is not a matter on which a general rule can or should be laid down. Obviously, a country with a low national income per head cannot afford a library on a lavish scale. Nor does a school that makes extensive use of part-time clinicians for teaching need an extensive research library on the spot. Moreover, much depends on the language of instruction and the languages with which teachers and students are familiar. There are valuable lists of selected books and journals for small medical libraries which WHO can recommend. We think that a collection of 5000 volumes and a maximum of 150 periodicals should be sufficient. There should, however, be adequate access to a larger collection kept elsewhere. One solution to the problem of access to wider reading, which has proved successful in Latin America, is to establish a supplementary regional library on which medical schools can draw.

Staffing and curriculum. The key to economical staffing is the use of local medical and other personnel to participate in pre-clinical teaching and the extensive use of clinicians for clinical teaching. Often a considerable amount of the teaching of the basic sciences could be provided by clinicians who are well grounded in these subjects. This has the special advantage that students are exposed at an early stage to the problems of patients and come to appreciate the direct application of the basic sciences in medical practice. Indeed, if the aim of the faculty is to educate primary care physicians as well as general internists and surgeons, there are few subjects in the medical curriculum for which local expertise could not be found among the practicing physicians in an area.

The introduction of medical students to a hospital need not disturb the service it provides to patients. The staff may have to be strengthened

at particular points, but extensive use can be made of those in hospital posts to do the clinical teaching, and most will agree to provide it on a voluntary basis.

Studies of the natural history of diseases and the problems of organizing health services should focus on the major diseases and problems of the area. The curriculum of a new medical school need not follow that of traditional schools elsewhere but should be adapted, in light of the special needs of the country, to the roles its graduates are likely to play. Students should have frequent contacts with the local health facilities - health centers, first aid posts, and outpatient departments - so that they may become familiar with community health problems outside the hospital. A particularly effective and economical way of giving students a clear preview of their future work is to assign them at the clinical stage, singly or in pairs, to selected general practitioners who are willing to receive them. Many practitioners are glad to have students assigned to them, and students can derive great benefit from the experience.

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To Teach is to Serve

Moshe Prywes

[Medical training and health care too often move in separate orbits. In Israel's Negev, a new Regional University Center for Health Sciences will attempt to orient medical students towards the needs of the community and to blend practicing physicians, faculty members, students and community residents into a comprehensive medical services program.]

Medical education is a socio-cultural complex of values and inter-relationships, and only partly a scientific discipline. It must not be regarded as aim in itself, but as a mission-oriented endeavor, judged by its contribution to improving a nation's health and developing new models of medical care. However, the two systems, medical education and medical care, moved by different ideologies, too often turn in separate orbits. Academic medicine has only seldom tried to direct health delivery systems outside its own sphere. Medical academicians have preferred to remain in the comfortable micro-environment of their university hospital and research laboratories. If the academic medical community could find the way to fight for the privilege of molding medical care delivery systems in the community with the same strength and vigor with which it has traditionally defended its research and teaching privileges, we might find a balance, not only between medicine and science, but between medicine and society. If, however, it continues to disregard the community's needs for better, cheaper and more easily accessible health care, and does not educate

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health professionals who are aware of their community role, medical education will not fulfill its fundamental social objective.

The Problem In Israel

Although Israel has highly developed health services, three medical schools for a population of three million people, and the world's largest ratio of physicians to patients (300 doctors per 100,000 population), it has not escaped the common pitfalls of fragmentation of health services and uneven distribution of health personnel between urban and rural areas. Moreover, graduates of Israeli medical schools tend increasingly to cluster around the academic medical centers and their affiliated hospitals where they can work as specialists. This leaves older and new immigrant doctors to work in urban and rural public health clinics where they are isolated from advanced medicine institutions and gradually sink into a depressing pattern of routine conveyor-belt medicine with abundant professional and social frustration and discontent.

One could hardly be surprised at this process: medical students who spend seven undergraduate years in a "closed" medical center, followed by five or six years of residency training, mainly in a similar major teaching hospital, are naturally propelled to continue as specialists in those institutions where they were educated. Today's medical students and young residents generally do not see their teachers working outside the hospital or research laboratory. They are sufficiently intelligent to realize the difference between preaching and practice, and neither sermons nor the promise of financial gain will convince them that what their teachers ignore can be significant. Thus no true change in the system of medical education is possible until the medical school accepts responsibility for the provision of medical services in its geographic region. This seems feasible only when both objectives are equally incorporated within one Regional Center for Health Sciences.

Negev University Center For Health Sciences

It is impossible to change the education of physicians until we change the health care delivery system in which they work. The new experiment launched in Israel through the establishment of an autonomous Regional University Center for Health Sciences in the Negev has two objectives:

- a) to unify all health services in the region into an integrated system providing comprehensive medical care through better use of organizational, financial and manpower resources; and
- b) to merge this system with the academic responsibility for medical education by educating physicians who are aware of

the needs of the community and wish to work both in hospitals and in primary care clinics.

The Center is being established in the Negev, Israel's southern region, comprising some 13,000 sq. km. and a population of nearly 300,000 inhabitants, including new immigrants from Europe, North Africa, North and South America as well as some 30,000 nomadic Beduins. It has six small development towns in addition to the principal city of Beersheba, and several dozen cooperative and collective settlements (kibbutzim). The economy of the region is mainly agricultural but there is also recent industrial development in textiles, petrochemicals, potash, copper, glass and fine mechanics.

The new Regional University Center for Health Services in the Negev would strive to integrate under one authority the two institutions now providing health care in the Negev - Kupat Holim (Labor Federation Sick Fund) and the Ministry of Health - together with a new medical school to be opened at the young University of the Negev in the fall of 1974. The new arrangement will embrace all officers of health agencies and hospitals in the region, routine care clinics and community health centers. Community physicians will be members of the various hospital departments, while hospital specialists will be responsible for providing high quality service to patients in both hospital and community.

There will be a two-way system of rotating hospital and community physicians. Hospital physicians will serve on a rotating basis in community clinics where they will help general practitioners. They will also fill in for general practitioners and family physicians who are entitled to one month of post-graduate education each year, usually in the form of in-service hospital training. The system has already been partially introduced in the Beersheba Hospital and, completely, in the Red Sea port city of Eilat. Many of the hospital residents in Beersheba and Eilat work part-time in kibbutzim and even live there. This program of rotation will be strengthened under the Regional Center arrangement. Ultimately it will improve health care, eliminate unnecessary duplication, and save equipment and money.

The dynamic health care system that will develop under these conditions will serve as a unique laboratory for medical education. Medical students will be attached to practitioners in urban and rural clinics, from their entry into medical school until graduation. This is also the best form of continuing education, since the physician who is supposed to teach must continue to learn in order to function as a teacher. A special program in teaching methods for community physicians is being designed.

Every physician in the Negev will be a potential member of the faculty. If physicians who work in the comprehensive community medical services prove that they can be good doctors and successful teachers, they will receive academic recognition similar to that of their hospital or laboratory counterparts. Only equal recognition of teaching and research efforts will make it possible to create a balanced faculty whose primary function will be to educate a new generation of physicians dedicated to service. The slogan of the new Center will be: "All who teach - serve! All who serve - teach!" If this new approach of linking medical education with community services succeeds, it will greatly improve primary care and make it attractive for young graduates. Students who seek an efficient health care delivery system with integration of hospital and community health services at the highest professional level, will find it both possible and worthwhile to practice good medicine in such a setting.

It is proposed also to integrate the new Center for Health Sciences with two other institutions to be established within the University of the Negev: a new Institute for Life Sciences (including the existing Negev Institute for Arid Zone Research), and the Institute for Behavioral Sciences, with a staff of psychiatrists, psychologists and social workers.

Training The "New" Doctors

The curriculum must ensure early and continuous exposure to the problem of health and disease, provide the student with basic scientific knowledge, and consciously cultivate values and approaches required for the fulfillment of his medical duties. Basic sciences and behavioral sciences will therefore be taught parallel with clinical studies and will be patient-oriented. Already in their first year, students under the supervision of special tutors will work in the emergency room, in different clinics and hospital departments, and will ride ambulances. They will thus be exposed early in their career to the human and sociological aspects of medicine, will have to assume responsibilities, and will gain greater understanding of the relevance of their subsequent studies. Basic science teaching will focus mainly on people, well or sick, and this approach would reinforce the importance of these disciplines in solving medical problems. Similarly, behavioral sciences will not be taught as separate disciplines but in relation to medical performance. Clinicians will be actively involved in science teaching, while scientists without medical training will be encouraged to take specially designed courses in clinical medicine. Teachers and researchers will be encouraged to relate their work to the needs of the region. Virologists, biochemists, physiologists or geneticists at the Center should become involved in solving viral, metabolic, physiological or genetic problems of the entire region, and psychologists, sociologists, anthropologists and economists on the faculty should contribute

the social dimension of these endeavors. Such integration of the basic and the behavioral sciences with the service function should result in a truly effective application of modern concepts to health and disease. Those who prefer, or require, the seclusion of the laboratory and the opportunity to devote their energies to pure research would also make a valuable contribution to the Center provided they were prepared to take their place as teachers of advanced students.

After completing half of their curriculum (3-4 years of basic sciences and clinical studies), students will devote one year to supervised practical work in the hospital and in community clinics. This year will resemble the traditional internship except that it will come in the middle of the medical curriculum. Students will then return to medical school for 1-2 years more, better informed and motivated to select the additional training which fits their needs and interests.

The Center will have a built-in system of evaluation which will permit the simultaneous evaluation of the health services and the educational program. Constant feedback will facilitate comparative studies on the inter-relationship between medical care and medical education. A "health map" of available services and required needs is being prepared and will periodically be compared with national health standards. Thus, strong or weak points of the on-going program will be revealed.

In addition to the medical school itself, the Center will comprise: a) a School for Continuing Medical Education, designed mainly for physicians who work in non-hospital settings and for new immigrant physicians; b) a Graduate School of Health Administration and Health Economics; c) a Nursing School with programs for registered and practical nurses, and specialities such as public health and community nursing, psychiatric nursing, midwifery and operating room nursing; and d) a School for Allied Health Professions including laboratory technicians, X-ray technicians, physiotherapists, occupational therapists, medical record librarians and medical secretaries.

In keeping with the philosophy governing the Center, a Public Advisory Committee of 50 community representatives from the Negev region, including mayors, representatives of local government workers, teachers, women's organizations, youth groups, local industry and kibbutzim, will serve as the vehicle for community involvement. This Committee will seek to deepen the health consciousness of the local population and will serve as the recognized channel of communication between the consumers and the Center. The Committee, which is being organized by a group of members of Israel's Parliament, may also be asked to raise funds for the Center and to organize volunteer services for the sick, the old and chronically ill.

Medicine will always develop along parallel lines with the progress of science and technology, and therefore it will tend to become more and more specialized. This in turn calls for strong safeguards to preserve the essential nature of medicine and medical care as dynamic processes designed for and serving living people. The experiment of the Negev Regional Health Sciences Center will enable us to work towards this goal more effectively.

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Health Strategy and Development Planning in China

Susan B. Rifkin and Raphael Kaplinsky

[Health planning in China is heavily oriented toward preventive activities, labor-intensive methods, and a reliance on indigenous medicine and specially trained auxiliaries. The evolution of the health system and its relation to successive development strategies are described.]

Only recently have developmental economists begun to consider health services as an important area of overall development strategy. Aside from Myrdal's Asian Drama, the literature on the relationship of health policy to economic development is still sparse, and few development plans explicitly recognize the need for integrating the health system into the strategies for development. While some professional health administrators and doctors continue to argue the need for integrated health and economic policies, few have heeded the call.

The level of per capita income is a major determinant of the extent of a nation's medical services, both in the prevention and cure of disease. Underdeveloped countries with low levels of per capita income generally do not possess the well-developed preventive infrastructures found in the industrial countries. Their labor is plentiful relative to capital; and given that there is a limit to investment in

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the health system, and assuming that health and medical care services are to be widespread, it might be expected that their health systems would stress prevention rather than cure, and would use labor rather than capital-intensive techniques. However, this is not the case. In most underdeveloped countries, the distribution of goods and services favors the relatively rich urban minority at the expense of the relatively poor and unskilled rural majority. Their health programs have stressed cure rather than prevention; in their delivery systems, construction techniques have been capital-intensive, and highly skilled doctors have been trained rather than medical auxiliaries. In addition, Western medicine has been stressed to the exclusion of traditional medicine, and doctors in private practice encouraged rather than public service. This is not to deny, of course, that there has been no flow of resources to preventive medicine in the rural areas - indeed in some underdeveloped countries there has been considerable progress in the control of epidemic disease. However, the preponderance of expenditure has gone into urban-based curative medicine.

The reasons why these countries developed these largely inappropriate health programs and delivery systems are varied and complex. The system has partially been a consequence of the structure of effective demand and its related factors: the elites, because of their high incomes and general good health, have had a lesser demand for the basic preventive services than the low income masses. Other reasons for these inappropriate decisions have been the nexus of decision-making commonly referred to as the "demonstration-effect," the historical ties of ex-colonies to the mother country. In contrast, the Chinese health system provides a more preventive program to a larger part of the population with a more labor-intensive (and less import-intensive) delivery system.

The Chinese System

History. The Chinese health and medical services are a reflection not only of a restructuring of the pattern of effective demand, but also of the government's development strategy. With the rise to power of the Chinese Communists on the Mainland, the patterns of resource allocation were radically altered. As the revolution was based on the support of the small and middle peasants, one way of maintaining this support was to alter the distribution of welfare services to benefit the majority of people, 85 percent of whom lived in the countryside. To spread the limited resources in the health sector, the Chinese leadership as early as 1950 began to stress preventive health care and the distribution of these services to the rural population.

The growth and distribution of health and medical care services in China have followed the various stages of economic development. The

period from 1950-52 was one of economic rehabilitation. The government established the Ministry of Public Health in 1949 and strengthened the already existing hospitals and research centers. Private practice was strongly discouraged, and medical schools expanded to train more personnel for public service. To disperse medical care from its concentrated urban base to China's rural population, other measures were taken. Most important was the establishment of health teams. The early work of the teams focused on anti-epidemic activities which included staffing and multiplying anti-epidemic stations, establishing maternal and child care services, training locals to carry out preventive work, including health education and vaccination inoculations, and establishing health services in the isolated rural districts.

The period of the First Five Year Plan, 1953-57, emphasized the development of the heavy industry rather than agriculture, and accordingly health policies focused on programs to benefit urban workers. Preventive programs continued, as did the training of new personnel, but there was little expansion beyond basic health services in the rural areas. Then by 1956, economic planners realized the necessity of placing more emphasis on agriculture and the development of the rural areas, and began to formulate plans which have marked the direction of both economic development and health care services until the present time.

By 1958, the communes had emerged as the cornerstone for the implementation of the economic infrastructure of the Great Leap Forward. The decentralization which permeated organizations throughout the country resulted in the field of health work in the formation of the rural health center or hsien (county) hospital (see Figure 1), which became responsible for all health activities of the commune and adjacent areas which were unable to support their own center. Their major tasks included responsibility for out-patient and regional health work; the direction of mass campaigns; the investigation and control of contagious diseases; the inspection of public mess halls, nurseries, kindergartens and maternity hospitals; the delivery of medical care; and responsibility for all preventive work. By 1965 all of China's 2,000 counties had at least one health center or hospital.

The economic decentralization which began in 1956 and accelerated in the Great Leap period met with obstacles in 1959, and the years immediately following the Great Leap were ones of economic retrenchment and consolidation. "Self-reliance" emerged as a major theme for development. Although the policies of this period await clarification, during 1959-65 it appears that the leadership continued to protect the health of the rural agrarian manpower. Facilities were expanded but at a reduced rate. Training of medical auxiliaries and diffusion of skilled medical doctors to rural areas remained policy

goals. Medical colleges were established in many of the provinces, and students were taught to combine scientific research with the economy's production objectives.

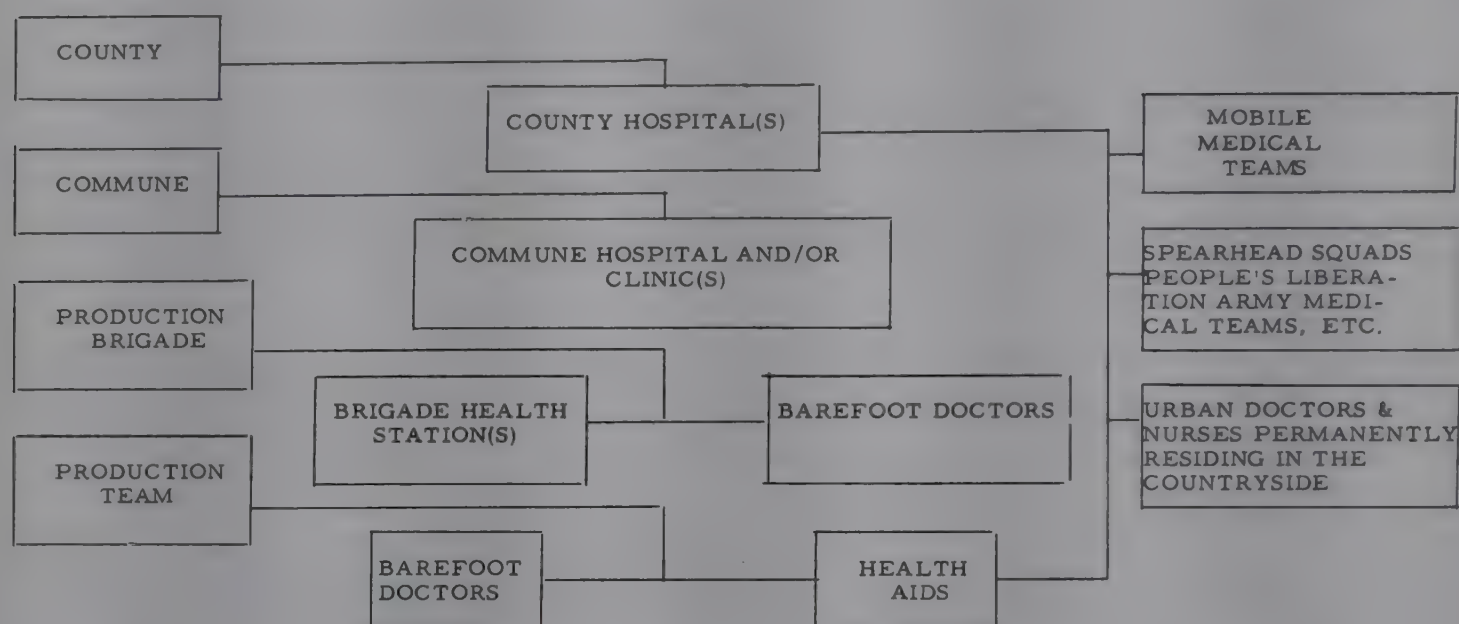


Diagram 1. Rural Medical Care Delivery System in China.

Source: Cheng Tien-Hsi "Disease Control and Prevention in China," in a paper presented to a conference on public health in the People's Republic of China, Ann Arbor, Michigan, May 14 - 17, 1972.

In the months immediately prior to the onset of the Cultural Revolution in 1966, concern for rural health services reached a new high. In 1965 Mao issued his famous June 26 directive stating, "In health work put stress on the rural areas." In the five months following this command, over 1,600 additional mobile medical teams comprising 20,000 urban medical professionals were sent to the rural areas. Led by prominent figures such as Dr. Huang Chia-ssu, President of the Chinese Academy of Medicine, these teams were organized on a scale involving large numbers of health and medical people on all levels. The transfer of personnel through mobile medical teams has become a permanent long range goal since 1965, with one third of all urban doctors serving in the countryside at any given time.

The Cultural Revolution and its aftermath has seen a more explicit development of the policy of "self-reliance". In addition to mobile medical teams, another development has been the growth of a co-operative medical scheme at the commune level. Although such a plan had

first appeared in 1958, because of the chaos and subsequent centralizing trends which followed the Great Leap it was not until the late 1960s that it made a widespread appearance. Basically, the system calls for the commune members to contribute a fixed amount per annum. In return, the patient pays only a minimal amount of money for treatment and medicine he receives.

While all these measures expanded rural health and medical services, the confusion of the Cultural Revolution made the firm establishment of the newly expanded services difficult. By 1968 it was apparent that the professional medical people could not carry out their tasks as members of the mobile medical teams and undergo political "rectification" simultaneously. In order to prevent a breakdown of the health system the political leadership turned to the one group that had remained relatively cohesive during this intense period of struggle, the army. By June of 1969, the People's Liberation Army (PLA) had sent more than 4,000 medical teams composed of 30,000 members into the countryside. By July 1970 they had sent 6,700 teams with 80,000 members for rural health work. The PLA has become the model for emulation for all medical and health work. Medical professionals are urged to set up hospitals in the character of the Red Army hospitals of the civil war period, 1937-49.

Some Results. Over the last 22 years, the Chinese have consistently stressed the need to place prevention first. Although there is no consistent time series data on monetary allocation to preventive activities, one indication that this policy has been implemented is the rapid decline in incidence and mortality rates of some of the most contagious diseases. For instance, tuberculosis in the pre-1949 period infected 3-9 percent of China's urban population. In 1956 the rate had dropped to less than 1 percent. By 1963, the tuberculosis mortality in Peking was 1.6 percent of what it had been in 1949. In the marshy Yunnan province, the incidence rate of malaria was 71 percent in 1950; in 1958 it had dropped to less than 3 percent.

One of the most dramatic vehicles of this improved health care ratio have been the mass campaigns. Mass campaigns for health purposes were called Patriotic Health Campaigns and were first initiated in 1952 to urge the people to improve village water sanitation and to eradicate the four pests (rats, flies, mosquitoes and bedbugs). Poorly organized, these initial campaigns were soon reconstituted as Shock Attack movements providing techniques for instant participation of the people whenever the authorities felt a health campaign necessary. Shock Attacks, which proved effective for an intensive effort for a short period of time, reached their zenith in the Great Leap period of 1957-58 at a time when agriculture became increasingly important in the strategy of economic development. Thereafter, campaigns were institutionalized as seasonal affairs aimed at the eradication of all major communicable diseases as well as the four pests.

Designing a delivery system. Having placed priority on a preventive program, the Chinese sought a delivery system to support this program. The key to this system was the utilization of available manpower. At its inception, the Chinese rejected the traditional orientation of a capital-consuming one-to-one doctor-patient relationship which stressed large investments in training facilities and hospital-based services. Instead plans focused on providing medical and health care for the greatest number of people at the least resource cost through: (1) labor-intensive construction techniques in public health through the use of mass-campaigns; (2) the training and use of medical auxiliaries; and (3) the incorporation of traditional medical practitioners into the health system.

We have already described the mass campaigns. It need only be stated here that one of the values of mass campaigns is the mobilization of manpower for labor-intensive construction at low opportunity cost. In activities for health education and disease eradication, as well as support for agriculture through irrigation projects linked with health, mass campaigns provided the manpower to carry out widespread health projects.

Auxiliary workers appeared in health work shortly after the founding of the People's Republic. Organized into health teams, these workers, under the direction of the mere 18,000-20,000 Western-trained medical doctors in China in 1950, carried out a number of health and medical measures and released the limited time and skills of the professional physician. The auxiliary workers were divided into four groups: (1) the specialist, educated for two years in one field of medical care; (2) the para-medical professional such as nurses and laboratory technicians who studied two-three years to perfect their skills; (3) the hygiene workers whose 3-6 months training focused on environmental problems and disease control; and, (4) the part-time worker who in a 1 day to 3 month training period learned how to give vaccinations and to recognize and report endemic diseases. Auxiliaries were taught both curative and preventive techniques, a policy which continues today.

In the growth of the Chinese health service, a policy of massive recruitment of medical auxiliaries has occurred on two occasions. During the Great Leap, the leadership launched a drive to disperse welfare services to the countryside and created a new type of auxiliary who was educated in the training centers that proliferated during this period. Studying medicine in part-time or spare time schools, these workers were trained to carry out rudimentary treatment, and preventive and sanitation work. This type of training was designed to enable the employment of these people in health work during slack seasons and provided means of on-the-spot treatment. It was also to create a corps of concerned local people who had a stake in the good health of their community.

At the beginning of the Cultural Revolution, with a renewed emphasis on rural health, the "barefoot doctor" appeared. These auxiliaries, like their Great Leap predecessors, are local people trained (in both Western and traditional methods) during agricultural slack seasons to serve the community in which they live. Depending on a system of referral to more highly trained personnel, on the periodic visits from the physicians of the mobile medical teams, on preventive medical techniques and on the high morale of and acceptance by the people whom they treat, these medical workers augment the ranks of available medical manpower. Their duties include treatment of minor ailments, responsibility for the organization of health education programs, patriotic health campaigns and general sanitation work in their locale. The work of the barefoot doctor is not only supported by the traditional medical assistants, nurses, midwives, laboratory technicians and the like but also by thousands of public health workers who participate in the implementation of the preventive program. In late 1969, the family health worker, a member of each commune household equipped with first aid techniques to treat minor problems and to aid actively in sanitation work and health campaigns, first appeared.

Another major policy for manpower mobilization focused on the incorporation of the traditional doctors into the health services. These 500,000 practitioners of Chinese medicine formed a resource pool which the Chinese leadership decided to tap. As early as 1954, the Chinese Academy of Traditional Medicine was established and in the 1956-58 period a concentrated effort was begun to introduce both traditional doctors and medical theory into the university classroom. A search for a synthesis between these two systems ensued, and students were encouraged to study both systems - this has been re-emphasized since the Cultural Revolution. In addition, Western trained doctors were urged to study Chinese medicine in special courses devised for this purpose. By 1958, there were reportedly over 13 colleges and several hundred secondary schools of traditional medicine, which were training 70,000 apprentices. Under this new official attitude, traditional doctors joined the national and municipal public health services in increasing numbers. They were assigned to hospitals and clinics of various types and were integrated into the existing organizational system. In the rural areas, their increased presence provided an alternative type of treatment to Western medicine - where, as the Chinese indicate, "the traditional methods are preferred because they are simple and effective and appropriate to the contribution and habits of the Chinese people." The traditional doctors staffed rural health centers, trained auxiliaries and carried out health team work. By 1956, 30,000 traditional practitioners had been incorporated into government public health offices.

In summary, the change of effective demand, and the creation of policies to meet this demand through preventive, labor-intensive,

rural-based health and medical services, relying on medical auxiliaries and mass mobilization techniques, are the chief characteristics of the Chinese health system.

Cost-Benefit Analysis

Cost-benefit analyses frequently ignore the problem of distribution. Some argue that it is mainly a normative problem concerning consumer welfare, having little effect on production. However, we believe that the distribution of health services affects not only the distribution of welfare, but also the production of goods and services over time. With regard to welfare, the Chinese health and medical care service improves conditions for the many - at least insofar as chronic and communicable diseases are concerned. With regard to production, it also seems likely that by establishing services able to remove or mitigate the diseases which are most widespread in the rural areas, a major impediment to high agricultural output could be removed.

The increased output resulting from a healthier labor force can be related to an increase in the productivity of capital and land (the scarce factors) in a number of ways:

1. The productivity of capital and land will increase owing to lower absenteeism, greater effort, longer working days and better morale of the labor force.
2. New lands can be opened up, as a result of the elimination of diseases in particular areas (e. g. malaria and schistosomiasis in China).
3. Increased health has a complementary effect with other inputs such as education and training, making investment in education and training that much more productive by enabling a more efficient absorption of training.
4. Increased health can be used as a propaganda weapon to increase the morale and effort of the working population - particularly in the Chinese case where the rapid increase of health services provides a concrete example of the interest of the leadership in the welfare of the people.
5. It is frequently argued that there is a link - albeit a complex one - between an increase in health standards and the decline in the rate of population growth.
6. A final advantage is that involving local people in rural health care acts to stem the urban-rural migration which is characteristic of most other underdeveloped countries.

The choice of an alternative health and medical service is not only a consideration of the benefits - but also of the costs which are entailed. The Chinese health system appears to have a lower resource cost than a more capital-intensive, curative, urban-based system. This is for a number of reasons:

1. A system which prevents problems seems intuitively (and is, if it is not absurdly costly) preferable to repetitive treatments of a chronic ailment. Preventive health services as a good example of this maxim are well-illustrated in the case of malaria control, where the elimination of malarial mosquitoes, and the use of malarial tablets, are much less costly than the repeated curing of the disease in the majority of the population.
2. By shifting a part of the cost of the health and medical care services to the commune level with the use of cooperative medical schemes, (which utilize medical auxiliaries and traditional doctors, and local herbs for drug production), the hard pressed central budget is relieved of part of its financial expenditure.
3. There is comparative evidence that the costs (both capital and recurrent) of rural health centers are much lower than those of complexes and hospital-based services. In Kenya, Fendall estimates the average costs of treatment per illness per person to be as follows:

	Shs.
Health Center	4/-
District Hospital	84/-
Regional Hospital	170/-
National Hospital	370/-

With regard to capital costs, a health center is estimated to cost £10,000 whereas the construction of a minimum size district hospital (with 60-100 beds) costs between £250-£500,000. An additional advantage of this system is that the relatively small sum of capital required to establish a health center is well within the reach of small, poor communities. A hospital, on the other hand is not, because it requires large and lumpy sums of capital and thus necessitates finance from hard-pressed central development funds.

4. The Chinese delivery system is more labor-intensive than any existing alternative curative system. In China the opportunity cost of this labor is low, mass mobilization techniques have been used, and the period used for training and for public works construction has been predominantly in the agricultural off-season.

5. The import cost of the Chinese health system has been much lower than that of a capital-intensive curative system. Partly it is because of the closed nature of the economy (which has been a result of both relatively autarchic development policy and the size of the market) and partly because of the labor-intensive nature of preventive services.
6. Another cost advantage in the manpower sphere arises from the use of traditional medical practitioners. While it unclear what the precise value of traditional cures is, there is no doubt that some are relatively effective and relatively uncostly. In addition a large element of medical help is of the emotional-support type and the relatively long time spent with patients by traditional doctors, together with the confidence with which they are viewed by the population, make them an important, effective and relatively cheap supplement to modern practices.

It has been argued that there are additional costs which are involved in the Chinese health system. Specifically, these are that the Chinese health system requires a high degree of political commitment and make arbitrary demands for the relocation of the urban doctors to the rural areas, running the risk of stimulating resistance and disruption of the health system. It is also argued that the stress on rural health has removed highly skilled doctors from their urban research facilities to primitive rural health centers where their talents are wasted. Quality is said to have suffered not only from the reformed education system and the transfer of urban personnel to rural areas but also from the incorporation of traditional medicine and practitioners and the growth of the medical auxiliary corps. Finally, the elimination of the division of labor between agriculture and health work, it is claimed, has led to a decline in productivity in both sectors.

In conclusion, the study suggests that as a result of both the changed structure of effective demand and a health policy which was integrated into the general development strategy, the Chinese produced a unique health system which was well suited to its factor endowments and to relieve its supply bottlenecks. This does not argue, however, that the Chinese system can be transferred to other countries. The suitability of the various elements in the Chinese health system for other underdeveloped countries awaits further study.

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